
Using the SOCFI CAR

**An Enabling Manual for the
Synthetic Organic Chemical Manufacturing Industry (SOCMI)
Consolidated Federal Air Rule (CAR)**

September 28, 2001

Disclaimer

This enabling document provides technical assistance to regulated entities and to state, local or tribal permitting agencies pertaining to compliance with the Consolidated Air Rule (65 FR 78268, December 14, 2000). This document is not intended to be a substitute for the rule. The document does not address all parts of the rule and may not reflect subsequent rule amendments. If there are any discrepancies between this document and the rule, then the provisions of the rule apply.

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1.0 Overview of the CAR

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What is the CAR?

The purpose of this enabling manual is to assist facilities in the evaluation of the Consolidated Federal Air Rule (CAR). The CAR is an *optional* regulatory program developed as a pilot program under the Clean Air Act (CAA). This pilot project is for the synthetic organic chemical manufacturing industry (SOCMI). The primary goal of the CAR is to *reduce the burden* and potential confusion of complying with multiple air regulations for the sources at a single facility, *while ensuring protection of the environment and improving compliance*.

The topics included in this enabling manual are based on the regulation, which creates part 65 of Title 40, Chapter I of the Code of Federal Regulations (40 CFR part 65). Any facility considering opting into the CAR should review the final rule published on December 14, 2000 (65 FR 78268).

This document summarizes regulatory provisions of the CAR. In addition, the appendices will assist you in evaluating the potential benefits of complying with the CAR.

Appendix A: Burden Reduction Analysis.

This appendix contains the assumptions, methods, and results of an analysis conducted to enumerate the burden reduction associated with opting to comply with the CAR.

Document Outline:

1.0 Overview of the CAR

1.1 History and Purpose

1.2 Function and Structure

2.0 Summary of the CAR

2.1 General Provisions

2.2 Storage Vessels

2.3 Process Vents

2.4 Transfer Racks

2.5 Equipment Leaks

2.6 CVS/CD

3.0 Burden Reductions and New Requirements

4.0 Implementing the CAR

Appendices

1.0 Overview of the CAR

Appendix B:

Cross Referenced Sections.

This appendix provides a list of all citations within individual rules that are not incorporated into the CAR. Facilities subject to these subparts will need to continue to comply with these requirements *even if they opt to comply with the CAR*.

1.1 Overview of the CAR

1.1 Overview of the CAR - History and Purpose

Why did EPA investigate rule consolidation?

Over the past 25 years, EPA has issued a series of Federal air regulations, many of which affect the same plant site. As a result, many facilities are now subject to multiple Federal air rules. Each rule has its own emission control requirements as well as monitoring, recordkeeping, and reporting requirements. Although these rules were developed for different purposes, under different statutory authorities, and apply to different pollutants, they impose many duplicative or near duplicative requirements on a plant site, thus complicating implementation of—and compliance with—these rules.

On March 16, 1995, President Clinton and Vice President Gore announced several initiatives aimed at reinventing environmental regulation. One of those initiatives was to consolidate Federal air rules, so that all Federal air rules for any single industry would be incorporated into a single rule. This rule would consist of ". . . one set of emission limitations, monitoring, and recordkeeping and reporting requirements."

The EPA decided to develop a pilot project to study the feasibility and practical implications of consolidating and streamlining existing rules. The pilot project was also to establish a workable process for consolidation that can be applied to other consolidation efforts in the future. This program would be an *optional* alternative regulation for facilities subject to the consolidated requirements.

Why was SOCFI selected?

The EPA selected SOCFI because of the large number of similar Federal air regulations that can potentially apply at a single location. The SOCFI is subject to new source performance standards (NSPS) and national emission standards for hazardous air pollutants (NESHAP) under the Clean Air Act (CAA), as well as to Resource Conservation and Recovery Act (RCRA) air standards.

Are all rules affecting SOCFI included?

The EPA determined that the pilot project would focus on only promulgated air regulations under the CAA. The EPA's intent was to keep the rule development process manageable and to ensure that the CAR development could be completed within a reasonable timeframe. The following types of rules were not included in the CAR at the initiation of the project:

- proposed rules (since rules can change significantly between proposal and promulgation),

1.1 Overview of the CAR

History and Purpose

- other rules potentially subject to significant changes (for example, wastewater hazardous organic NESHAP), and
- rules under other authorities such as RCRA.

Scope of the CAR (What Rules Were Consolidated?)	
40 CFR part 60, subparts: A ☞ Ka ☞ Kb ☞ VV ☞ DDD ☞ III ☞ NNN ☞ RRR	(NSPS for VOC) General provisions Petroleum liquids storage Volatile organic liquid storage SOCFI equipment leaks Certain polymers and resins process vents SOCFI air oxidation process vents SOCFI distillation process vents SOCFI reactor process vents
40 CFR part 61, subparts: A ☞ V ☞ Y ☞ BB	(NESHAP for individual HAP) General provisions Equipment leaks for benzene and vinyl chloride Benzene storage Benzene transfer
40 CFR part 63, subparts: A F ☞ G ☞ H	(NESHAP for multiple HAP) General provisions SOCFI applicability SOCFI storage, transfer, and process vents SOCFI equipment leaks
☞ The CAR calls these rules "Referencing subparts." A referencing subpart is a subpart for which the SOCFI CAR is an alternative means of compliance.	

Were non-SOCMI rules considered?

The EPA also considered other rules for inclusion in the CAR process. For example, the EPA evaluated whether to include:

- 40 CFR part 60, subpart GGG for petroleum refinery equipment leaks,

- 40 CFR part 60, subpart KKK for onshore natural gas processing equipment leaks, and
- 40 CFR part 63, subpart I for certain non-SOCMI processes subject to the negotiated regulation for equipment leaks.

For regulatory requirements, each of these three rules refer sources to some of the consolidated subparts. However, these rules do not themselves regulate SOCMI sources. Therefore, they were not included in the CAR.

What are EPA's goals for the CAR?

The following goals and objectives were established by EPA for developing the proposed consolidation:

1. **Reduce regulatory burden** by consolidating and simplifying requirements and eliminating duplicative requirements.
2. **Facilitate implementation and compliance** by making the requirements easier to understand and incorporating streamlined compliance approaches from more recent rules.
3. **Consolidate** the present system of Federal air rules that apply to SOCMI facilities into a single **rule without compromising environmental protection and enforceability** by maintaining (or increasing) the emission control levels of the underlying rules.

What general approach was followed?

The EPA drew on experience and understanding of regulatory issues affecting the SOCMI in the drafting of the CAR; the CAR therefore represents the EPA's most current thinking on regulatory issues affecting the SOCMI.

Through the CAR, EPA has recognized that the strategies and approaches for regulating the various SOCMI source types (for example, storage tanks

Benefits for CAR Participants:

1. Clear guidance on the specific requirements that apply where multiple rules apply.
2. Consistent requirements for identical units.
3. Reorganized requirements that reflect industry operating structure.
4. Lower cost because of lower reporting costs and reduced monitoring.
5. One regulatory program to follow instead of several overlapping programs.

or equipment leaks) have evolved and improved over the past 25 years. The CAR includes some enhancements and clarifications of these underlying rules, including the most recent SOCOMI rules—the Part 63 NESHAP (known as the Hazardous Organic NESHAP, or HON).

The EPA has worked extensively with industry to review the rules included in the CAR and identify potentially overlapping or redundant requirements. Existing regulations, such as the HON, have paragraphs that explain how to handle potentially redundant requirements. However, the applicable requirement in these cases is not always the HON, requiring facilities to jump between multiple rules to develop one all-inclusive list of requirements. The CAR is a consolidated compilation of all applicable requirements.

Throughout the CAR development process, the EPA has been able to work with industry representatives who have been actively implementing the various NSPS and NESHAP. During the CAR development, the EPA has been able to clarify requirements that the industry or enforcement agencies have found vague or confusing. Some of the requirements in the CAR have been reorganized. The organized requirements more logically align with the roles and responsibilities of individuals within a typical SOCOMI facility, and therefore make the rule easier to implement.

How is environmental protection ensured?

It is important to emphasize that, although multiple rules with different drivers and regulated pollutants were targeted, *the environment will not be adversely impacted* by this rule. In fact *overall emissions may actually decrease*. It is not EPA's intent to alter the applicability of the underlying rules. Thus, only sources already subject to an underlying rule would be affected by the CAR. Likewise, no source subject to an underlying rule would become exempt under the CAR. It is anticipated that, due to the burden reduction afforded by the CAR, sources will choose to comply with the CAR despite potential increases in stringency over some provisions in the underlying rules.

Can you quantify any of the benefits to industry?

A detailed accounting of the benefits on compliance through the CAR is presented in section 3. However, EPA has evaluated the burden reduction for a typical facility. This reduction comes from the following:

- Combination of all semi-annual reports into a single semi-annual report

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- Exceedance reports for monitored parameters are submitted semi-annually as opposed to after each occurrence.
- Reduction in the monitoring frequency for some equipment leak sources.

The estimated reduction based on streamlined and reduced monitoring, recordkeeping, and reporting for a typical facility is approximately 1700 hours. EPA estimates ranged from 500 to 3400 hours or more saved per facility; savings is a function of the size and complexity of the individual facility. This is an overall burden reduction of approximately 30 percent.

How Much Can I Save?

- Estimated savings vary by:
 - size of facility
 - complexity of facility
 - number of existing rules currently applicable
- Estimated savings range from:
 - 500 to 3400 hours per year
 - 1700 hours per year at typical facilities

Model CAR Unit* Assumed for Burden Reduction Estimates:

- 25 parameters to monitor at control devices throughout the facility (2.5 per control device at each of 10 process vents)
- 17 affected storage vessels of various capacities
- 4 affected transfer racks
- 2 overall leak detection and repair programs, 2000 points each
- 1 facility-wide inventory of emission points

Additional benefits not specifically costed include:

- Reduced time for new employees to learn requirements (since virtually all are now contained in a single rule)
- Clearer text and a single set of requirements leading to fewer varying interpretations by enforcement personnel.
- Reduced chances of "notices of violations" from improper or insufficient monitoring, recordkeeping, and/or reporting (and the potential fines associated with these violations)
- Elimination of differencing requirements among the referencing subparts for the same type of sources.

1.2 Overview of the CAR - Applicability and Structure

If I do not want to use the CAR, what do I need to do? The CAR is proposed as an *optional* compliance method for sources that are subject to one of the referencing subparts. Sources that are not eligible or that choose not to comply with the CAR will continue to comply with the applicable referencing subparts with no change in compliance requirements.

Nothing new must be done at a source that chooses not to implement the CAR.

How do I know if I am eligible for the CAR? Any source subject to a referencing subpart can use the CAR as a compliance option. This means that a facility may choose to opt in all equipment at the facility that is subject to a referencing subpart or just one affected source (e.g., one subpart Kb tank).

There are two exceptions where the source definition in a referencing subpart does not match the regulated source in the CAR. In one situation, the source for 40 CFR part 61, subpart V is an individual piece of equipment like a pump or a valve. In this case, owners or operators must opt in the entire group of affected equipment at a process unit. This requirement does not alter the applicability of subpart V to a facility; it only affects the set of equipment that can comply with the CAR. The second situation where the regulated source in the CAR does not match the source of the referencing subpart is in the HON. Under the HON, the affected source is the total of all applicable emission points at the plant site that are subject to the HON. Thus, a HON facility that contains more than one chemical manufacturing process unit (CMPU) would consist of only one affected source, which would be the collection of all subject CMPU's. However, under the CAR the regulated source is a collection of emission points within each CMPU. Thus, a HON facility can choose to opt into the CAR for one or several CMPU's or for the entire collection of CMPU's that comprise the HON affected source.

How do I implement the CAR? After you have determined the emission units for which you want to use the CAR, we suggest that you meet with your permitting authority. By mutual agreement, you can determine the process and schedule for transitioning to the CAR. You should agree on any new controls, testing, and monitoring requirements. You should also discuss the process for obtaining any new or revised permits that must be obtained. Since you may choose not to have all of your emission units switch to the CAR at the same time, you should

arrange with the permitting authority a schedule for transitioning to the CAR. During the transition, each emission unit must comply with all requirements of the referencing subpart until full compliance with the CAR is achieved.

When can I implement the CAR?

The implementation date must be established by mutual agreement between the facility and the regulator (Administrator or delegated authority).

What is the structure of the CAR?

Because the CAR would consolidate existing regulations from 40 CFR parts 60, 61, and 63, a new *part 65* was created to contain the consolidated rule. Part 65 will contain the CAR, as well as any future rule that consolidates Federal air rules for other industries.

The CAR has been developed as a set of subparts containing all the required elements relevant to a source owner or operator who chooses to comply with the CAR. Each subpart applies to a specific type of emission point or aspect of regulation. The overall subparts of the CAR include the following (note that subpart B is reserved for future use):

Subpart A (general provisions)

These provisions address the administrative aspects of the regulation (for example, where to send reports, timing of periodic reports, definitions, how to request an alternative means of emission limitation), and those provisions which are widely applicable to all sources (for example, prohibitions and operation and maintenance requirements).

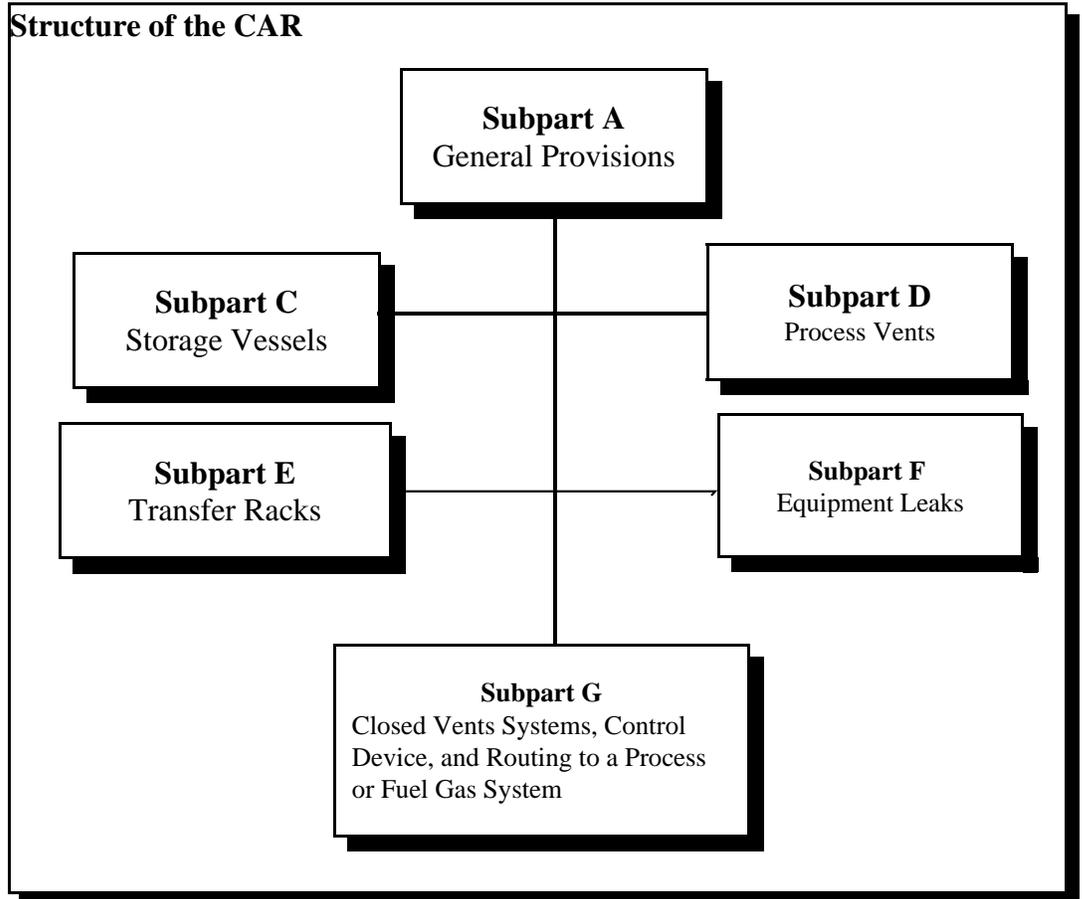
Subparts C through F (emission points)

Subpart C (storage tanks), subpart D (process vents), subpart E (transfer operations), and subpart F (equipment leaks) contain the compliance options and all the specific requirements for each of those types of emission points.

Subpart G (closed-vent systems and control devices)

Subpart G contains all the provisions on closed-vent systems and control devices, including testing, monitoring, data handling, reporting and recordkeeping, and control parameter monitoring system (CPMS) provisions. This was created as a stand alone subpart because provisions in the referencing subparts for closed-vent systems and control devices are all very similar. By consolidating all of these provisions, much overlap and duplication in monitoring, recordkeeping, and reporting is eliminated, and the requirements are standardized.

What are the benefits of using the CAR



The modular approach is designed such that once a source operator decides to comply with the CAR, (essentially) all applicable provisions would be contained in the CAR. The source operator would not need to refer to the referencing subpart after applicability is established, unless specifically directed to do so in the CAR.

For example, a process vent subject to 40 CFR part 60, subpart NNN (distillation NSPS) would be referred to subpart D of the CAR for applicable process vent requirements. If controls are required, the source would subsequently be referred to the CAR subpart G for closed-vent systems and control devices, and would not need to refer further to subpart D.

Subpart G, for closed-vent systems and control devices, contains all the provisions needed to comply if a vent is routed to a control device. Sources complying with the CAR are subject to the CAR's general provisions

(subpart A) and also to a few clearly noted provisions in the general provisions to the referencing subparts; these provisions mainly pertain to applicability and compliance schedule.

CAR Enhancements:

- Modular approach
- Clear references
- Consistent requirements for similar equipment and controls

The CAR is also structured within each of the subparts to facilitate function and ease of use. The proposed CAR has been written with a "user-friendly" approach, and the subparts more clearly delineate the requirements that would apply to each plant function.

For example, the proposed storage vessel provisions contain distinct requirements for design, operation, inspection, and repair for each kind of storage vessel. This approach is intended to simplify tasks for the design group or the inspection group at the plant, and to avoid each group having to search the entire regulation for relevant requirements.

The CAR's structure facilitates the consolidation of all the recordkeeping and reporting activities of the referencing subparts into one system. Chemical plants subject to numerous NSPS and NESHAP could combine multiple systems tracking multiple regulations into a single greatly simplified compliance effort.

As an aid to the user, the CAR includes a table that lists the provisions of the referencing subparts that still apply to sources complying with the CAR as an aid to the user. Also, correlation tables (see Appendix C of this document) have been developed that give a paragraph-by-paragraph comparison of each referencing subpart and its corresponding CAR paragraph. These correlation tables can be found on the EPA Technology Transfer Internet site (www.epa.gov/ttn/atw/car/car_rdp.html).

2.0 Summary of the CAR

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How is the CAR organized?

Under this section, we will review the major requirements of each subpart under the CAR, which is codified under part 65 of 40 CFR. We will also review the major changes, improvements, and burden reductions of the CAR relative to the existing referencing subparts. This portion of the document is organized as follows:

- Section 2.1: General provisions (subpart A),
[Subpart B is reserved],
- Section 2.2: Storage vessels (subpart C),
- Section 2.3: Process vents (subpart D),
- Section 2.4: Transfer operations (subpart E),
- Section 2.5: Equipment leaks (subpart F), and
- Section 2.6: Closed vent systems, control devices, and routing to a fuel gas system or process (subpart G).

Note that while the general provisions includes the definitions for the entire SOCFI CAR, the definitions that apply to specific provisions are explained under those sections. For example, changes to definitions for types of floating roofs are discussed under Section 2.2.

2.1 Summary of the CAR - General Provisions

What is included in the part 65 general provisions?

The part 65 general provisions consolidate the SOCFI-applicable general provisions from subparts A of 40 CFR parts 60, 61, and 63. In addition, provisions in the HON (from 40 CFR part 63 subparts F and G) that are general in nature are also consolidated in the part 65 general provisions.

The part 65 general provisions were developed to ensure that all procedures that were general in nature—such as the administrative and procedural requirements—are in one centrally located spot. This eliminates the unnecessary redundancy that would occur if these requirements were repeated in each individual subpart. All definitions for the SOCFI CAR are also included in subpart A. This single list provides the reader with one master list of all definitions, without the need to search multiple lists for a needed definition.

The consolidated general provisions focus on the administrative aspects and broad requirements that are generally applicable to all sources complying with the CAR. This includes:

- definitions,
- operation and maintenance requirements,
- general recordkeeping and reporting procedures,
- compliance determination, and
- administrative provisions, such as:
 - availability of information,
 - state authority and delegation,
 - circumvention restrictions, and
 - addresses of regional and state offices.

CAR Consolidation Overview:

- Consolidates (almost all) requirements from subparts A of parts 60, 61, and 63
- Consolidates provisions from the HON that are general in nature
- Focuses on:
 - Administrative requirements
 - Broad requirements that apply to all sources complying with the CAR

One important difference between part 65 and the referencing subparts is the location of testing and monitoring provisions for add-on control equipment.

While the general provisions of the referencing subparts include information about the specific control devices, the part 65 general provisions do not. Rather, all of the control device-specific requirements are included with the other requirements for closed vent systems and control devices in subpart G. By including these requirements in subpart G, EPA has provided the owners or operators with virtually all requirements for these systems in a single location.

65.1

Do I still need the general provisions for the referencing subparts?

Although every effort has been made to make the CAR a stand-alone rule, there are certain requirements in the general provisions to the referencing subparts that are not addressed in part 65; *these requirements are still applicable to sources complying with the CAR*. These non-consolidated requirements generally apply to new sources and include pre-startup activities, applicability, modification, and reconstruction requirements. A table summarizing these requirements is included in the CAR general provisions and in Appendix B. In addition, the actual regulatory text for each of the requirements that still apply is also provided in Appendix B. Please note that this text is provided to assist you and represents the current text for these sections, as of December 2000. Requirements, especially those of part 63, are subject to change.

Owners and operators who opt to comply with the CAR are still obligated to fulfill requirements that applied while they were complying with a referencing subpart. For example, if a facility is required by a referencing subpart to complete a performance test, opting to comply with the CAR does not remove this requirement, nor does it protect a source from enforcement actions for not completing the test while subject to the referencing subpart.

65.2

How were the definitions consolidated?

The CAR consolidates definitions from all 12 of the referencing subparts, as well as from 40 CFR part 63, subpart F (i.e., the HON applicability provisions) and the general provisions from parts 60, 61, and 63. For those sources opting to use the CAR, the definitions in the referencing subparts should be used only for terms that are not otherwise defined in either the Act or Subpart A of the CAR. In developing the definitions for the CAR, EPA assessed all of the definitions in all of these subparts.

In some cases, slight language variations exist in definitions that result in no substantive difference in the terms. The EPA recognized that multiple definitions for the same term or phrase has led to confusion in the past. Therefore, a single set of definitions was developed for implementing the CAR and is included in the general provisions. A single set of overriding

definitions eliminates this unnecessary confusion. The HON language generally provides the basis for the CAR definitions; however some terms have been revised from the HON and some have been taken from other referencing subparts.

Improved Definitions in the CAR:

- Reduces wordiness and redundant language
- Improves clarity of potentially confusing terms
- Replaces multiple similar terms with a single term
- Provides one set of definitions (instead of 16!)

While the general provisions includes the definitions for the entire SOCOMI CAR, the major changes to definitions that apply to specific provisions are explained under those sections. For example, changes to definitions for types of failures for floating roofs are discussed under Section 2.2 of this manual and terms such as “in regulated material service” and “repair” that are used for equipment leaks are discussed in Section 2.5 of this manual.

65.3

What are the operation and maintenance requirements?

In § 65.3 of the CAR, the provisions regarding compliance with operational and maintenance requirements are consolidated. §65.3 provides information on the times when these standards are (and are not) in effect as well as explaining what is (and is not) a violation.

The provisions of § 65.3 are consistent with the requirements under the HON, with only minor changes. These changes include small wording changes , as well as some organizational changes.

The resultant § 65.3 of the CAR provides clarity to part 60 and part 61 sources. Explicit text regarding compliance with standards and operation and maintenance requirements is not included in the part 60 or part 61 general provisions. Similar requirements, however, can be inferred from these rules.

When must I monitor?

In reviewing the operation and maintenance provisions of the HON, however, the EPA noted that the HON does not specify that monitoring must be conducted during startup, shutdown, and malfunction. The HON alludes to requirements for monitoring data for periods of startup, shutdown, or malfunction in the provisions for excursions that occur during such periods, but does not specifically require the monitoring. The CAR includes these specific requirements. Of course, monitoring is not required if the monitor

itself is malfunctioning (though collection of other available data may be required).

When must I be in compliance?

All units must be in compliance with the requirements of the SOCOMI CAR at all times, except during periods of startup, shutdown, malfunction, or nonoperation. However, this exclusion from the requirement to be in compliance does not apply automatically to all sources once a startup, shutdown, malfunction, or period of nonoperation occurs. If the ability for a particular emission point to be in compliance would not be affected, then that emission point must remain in compliance throughout the period of startup, shutdown, malfunction, or nonoperation. For example, a storage tank with emissions controlled by a floating roof must still have its emissions controlled by the floating roof if an associated process unit suffers a malfunction.

This requirement to be in compliance includes any required monitoring. (Note that if the monitor itself is not operational, then monitoring is not required.)

65.4

What are the recordkeeping requirements?

The recordkeeping section of the CAR general provisions establishes the basic requirements related to records retention, and availability and accessibility of records. Again, a primary benefit of these provisions is that they merge all the general recordkeeping and reporting provisions for all regulated sources into one place. While the requirements are substantially the same as those in the HON, burden reductions are achieved through simplification, clarification, and elimination of redundancy.

The CAR requirements for records retention are clearer than those in the referencing subparts in that they explicitly state record retention times for title V sources (5 years) and non-title V sources (2 years, unless a referencing subpart specifies otherwise). While the 5-year retention time for title V sources applies for all records required under the Act, retention time for title V sources is not stated explicitly in the 40 CFR part 60 and 61 general provisions. To avoid having to search through the CAR for longer retention times, the CAR lists all paragraphs where longer retention times are required; i.e., 8 years for some connector monitoring data.

The provision for the location that records must be maintained is one of very few instances in the CAR where the requirements are not consolidated. In this case, two different provisions are given: one that applies to sources that are

subject to the HON and a second provision that applies to sources subject to the 40 CFR parts 60 and 61 referencing subparts.

- The provision that applies to HON sources is from the HON. It states that records must be retained on site for 6 months and must be accessible within 2 hours. For the remaining 4 and ½ years, the records may be retained off site. This option is not available for sources complying with requirements originating from other referencing subparts.
- The provision that applies to the 40 CFR parts 60 and 61 sources states that records must be retained on site for 2 years, but may be retained off site for the remaining 3 years.

65.5

What types of reports are required?

The reporting requirements in the SOCM I CAR are provided in two distinct areas. The reporting section of the general provisions to the CAR specifies reports that apply to all or most sources that opt to comply with the CAR. Notifications and reports that are specific to particular emission points are addressed in the appropriate subpart of the CAR.

The reports required by the general provisions of part 65 are listed in Table 2.1-1. As shown in the table, not all of these reports are required to be submitted by each facility.

Although based on the HON, there are several enhancements over the existing reporting requirements. The CAR has greatly simplified the language regarding report submittal. The CAR's provisions on where to send the reports are based on the HON, but reduce six paragraphs of text into one short paragraph. The HON requires that all reports be sent to EPA Regional Offices, and also to State agencies once they have been delegated the authority to implement these rules. The CAR includes a new provision that allows a Regional Office to waive the reporting to EPA.

Another new provision in the CAR allows an owner or operator to submit semiannual reports on the same schedule as the title V periodic reports.

Furthermore, if a semiannual report requires the same information as that submitted in a title V report, the semiannual report for the CAR need only reference the title V report for the duplicative information.

2.1 Summary of the CAR

General Provisions

Reports Required by the CAR

In addition, a source owner or operator can arrange with the Administrator a common schedule for reporting, and may, upon approval, adjust a postmark or time period deadline to coincide with state reporting schedules. *This added flexibility for reporting schedules can reduce the number and frequency of report submittals for sources complying with the CAR.*

CAR Reference	Report	Who must report?	What is in the report?	When is the report due?
65.5(b)	Notification of Initial Startup	Owners or operators who opt into the CAR and have a new source	Notification of actual startup date [similar to reports from referencing subparts].	Postmarked ^a within 15 days of source startup.
(c)	Initial Notification for part 65 Applicability	Non title V facilities who opt into the CAR	<ul style="list-style-type: none"> • Identification of units and/or equipment subject to the subparts of part 65. • Implementation schedule, as required by 65.1(f)(1) . 	No specific due date is established. This is the method that owners or operators of non-title V sources inform the State or Region that they want to opt into the CAR.
(d)	Initial Compliance Status Report	All owners or operators opting into the CAR	May be satisfied with title V application or amendment.	Postmarked ^a within 240 days after applicable compliance date, OR 60 days after completion of initial compliance test, whichever is sooner.
(e)	Periodic Report	All owners or operators opting into the CAR	Requirements specified in individual subparts [may reference title V reports for duplicative information].	Semiannually-postmarked ^a within 60 days after the end of a 6-month period [specific guidance provided for first report].

2.1 Summary of the CAR

General Provisions

CAR Reference	Report	Who must report?	What is in the report?	When is the report due?
65.6(c)	Startup, Shutdown, & Malfunction Reports	All owners or operators opting into the CAR	<ul style="list-style-type: none"> Periodic reports- Certified report listing all times and time periods of startup, shutdown, or malfunction events and how long these events lasted, regardless of whether the SSM plan was followed or not. [can be part of periodic reports required by 65.5(e). 	<ul style="list-style-type: none"> Must be submitted with the periodic reports of 65.6(e) or the 30 days after the end of each calendar half, as appropriate.

^a“Postmarked” does not mean that reports can only be sent by U.S. mail. Submittals may be sent by other methods, such as fax or courier. Submittals must be sent on or before the specified date.

65.6 What are the requirements for startup, shutdown, and malfunction plans?

In general, everyone who opts to comply with the CAR, including those sources that are non-HON sources, are required to develop, implement, and revise (as necessary) a Startup, Shutdown, and Malfunction (SSM) plan.

The provisions for the SSM are based on requirements from the general provisions of part 63 and on specific requirements that were included in the HON. While changes have been made to fit the CAR format, the basic purpose of the SSM plan has been maintained. The goal of an SSM plan is to develop a protocol for minimizing emissions that occur during periods of startup, shutdown, or malfunction. It is expected that planning ahead for such episodes (such as obtaining spare parts for equipment that is subject to breakdown) will minimize the overall impact of these episodes.

Startup, Shutdown, and Malfunction:

- Provisions based on HON and Part 63
- Goal – minimize emissions during SSM
- CAR Advantage – Eliminates need for immediate reporting

Do I have to develop a plan for all sources?

Parts 60 and 61 do not require an SSM plan, so it may appear at first that this is actually an increase in burden. However, the ultimate effect of the CAR SSM plan is to reduce the overall burden. This burden reduction comes primarily from the reduced reporting requirement associated with operating under an SSM plan. Under part 60, a detailed report must be submitted for each individual startup, shutdown, or malfunction. Under the CAR, any startup, shutdown, or malfunction activity that is included in the SSM plan has no immediate reporting requirements. Instead, these events are included in the periodic reports. Therefore, a well developed and maintained plan will reduce overall burden.

As with the HON, this plan is optional under the CAR for equipment complying with the equipment leak provisions (i.e., subpart F), except that it is mandatory for equipment with a control

device. Any control device used for compliance with the equipment leak provisions are subject to subpart G of the CAR (as opposed to subpart F). Equipment subject to subpart G must be included in an SSM plan.

Startup, Shutdown, and Malfunction Plan:

- NOT incorporated by reference into title V
- Optional for equipment subject only to subpart F (equipment leaks)

What is the relationship between the plan and my title V permit?

The CAR does not require that the SSM plan be incorporated into the source's title V operating permit. In keeping with EPA policy directives, the CAR clarifies that the plan must be maintained onsite, but not necessarily incorporated by reference into a title V operating permit. The permit, however, must have an enforceable requirement to have a plan and to maintain the plan onsite. Since the SSM plan must be periodically updated, incorporation by reference would have required a permit modification for each revision to the plan.

65.7 & 65.8

Are the provisions for waivers and alternative emission limitations similar to other rules?

The CAR consolidates the mechanism for requesting alternatives and waivers for monitoring, recordkeeping, and reporting. The provisions in §§65.7 and 65.8 describe what is required of the applicant, as well as the procedures for approval or denial of the request.

The CAR expands the types of compliance requirements that can be included in an alternative emission limitation request. For example, the CAR specifically allows for alternatives for recordkeeping as well as monitoring requirements, while the referencing subparts specify alternative monitoring methods only. The CAR also includes procedures for requesting approval of an alternative means of emission limitation for design, equipment, work practice, or operational standards. This allowance is only in some of the referencing subparts.

Waivers & Alternative Emission Limitations:

- Waivers from monitoring, recordkeeping, and reporting
 - The CAR adds waiver provisions for recordkeeping
- Alternative emission limitations
 - Consolidated and presented in general provisions
 - Previously included in the individual subparts

65.9 - 65.14

What are the general administrative requirements?

The remaining sections of the general provisions to part 65 consolidate the administrative requirement sections of the referencing subparts. The CAR includes only minor wording changes and clarifications over the part 63 provisions, which were used as the basis for this section. For example, in the prohibitions provisions, the prohibition on failing to report is eliminated and replaced throughout the CAR with the specific requirement to report.

The administrative requirements sections include:

- **65.9 Availability and confidentiality of information**
States that all reports submitted are available to the public (some exceptions noted).
- **65.10 State Authority**
Allows state to enforce other rules and permitting requirements, as long as they are not less stringent.
- **65.11 Circumvention**
Prohibits circumvention of this rule; explains what is considered to be circumvention.

- **65.12 Delegation of Authority**
Allows for delegation of the CAR to states, with the exception of equivalency determinations
- **65.13 Incorporation by Reference**
Incorporates by reference several ANSI and ASTM methods.
- **65.14 Addresses**
Provides addresses for EPA regional offices and State offices for report submittal.

2.2 Summary of the CAR - Storage Vessels

Subpart C of the CAR outlines the compliance options for storage vessels and specifies the provisions for storage vessels with internal floating roofs (IFR)

and external floating roofs (EFR), as well as EFR that are converted to IFR. If the owner or operator chooses to control emissions from storage vessels using a closed vent system (CVS) and control device (including flares), or by routing emissions to a process or fuel

Storage Vessels Referencing Subparts:

40 CFR part 60, subpart Ka (petroleum liquids storage)
40 CFR part 60, subpart Kb (volatile organic liquids storage)
40 CFR part 61, subpart Y (benzene storage)
40 CFR part 63, subpart G (HON storage)

gas system, the provisions in subpart G of the CAR apply.

How is the storage vessels section organized

The CAR provides a major improvement in the structure of the requirements for IFR and EFR by organizing the requirements into separate sections; one for IFR and one for EFR. Also, each section of these sections is organized into separate paragraphs for design, operation, inspection, repair, recordkeeping, and reporting. The CAR is organized this way because, at any given plant, the people responsible for a particular aspect of managing storage vessels are not necessarily the same people who are responsible for other storage vessel activities. For example, the designer of a plant's storage vessels would not typically be the same person responsible for operating the vessels, nor would that person necessarily be responsible for inspection or repair of the vessels. For this reason, the CAR places the requirements for each of these activities into separate paragraphs, making it easier to locate and understand the requirement for each.

Floating Roof Provisions:

Separate sections for:

- IFR (§65.43)
- EFR (§65.44)
- EFR converted into an IFR (§65.45)
- Alternative means of emission limitation (§65.46)

IFR and EFR sections are organized by audience:

- Design
- Operation
- Inspection
- Repair

65.40

What are the provisions for storage vessels?

Only storage vessels subject to control requirements under one or more of the referencing subparts are eligible to use the CAR to comply with emissions control requirements. When using the CAR for compliance, should any physical or process changes cause a storage vessel to fall outside the criteria that made it subject to control under a referencing subpart (but still subject to other requirements of the referencing subpart, such as recordkeeping and reporting), then the owner or operator can choose to discontinue complying with the CAR (noting that the storage vessel would still be subject to the referencing subpart). In this case, the owner or operator must still comply with any applicable provisions of the referencing subparts.

Storage Vessels Applicability:

- The CAR is applicable to vessels where control is required (i.e., vessels subject to a referencing subpart)
- Stop using the CAR and revert to a referencing subpart if:
 - a process change is made, AND
 - control is no longer required.

65.41

Are there any new or changed definitions?

The CAR adds a definition of the terms “empty” and “emptying” to clarify provisions for raising and lowering floating roofs. The referencing subparts require a storage vessel to be filled, emptied, or refilled as soon as possible and in a continuous manner once the roof is resting on its supports. This requirement has been interpreted by some to mean that the liquid level in a vessel can be dropped below the level of the roof supports ONLY when the vessel is being completely emptied.

In practice, this can cause either:

1. a “loss” of available tank capacity, because an owner or operator maintains the liquid level at or above the roof supports to prevent fluctuations, or
2. the necessity to completely empty a vessel if fluctuations lower the liquid level below the level of the roof supports.

Definition of "empty" and "emptying":

Empty or emptying means the removal of the stored liquid from a storage vessel. Storage vessels where stored liquid is left on the walls, as bottom clingage, or in pools due to bottom irregularities are considered empty. Lowering of the stored liquid level, so that the floating roof is resting on its legs, as necessitated by normal vessel operation (for example, when changing stored material or when transferring material out of the vessel for shipment) is not considered emptying.

Emptying a tank can also result in significant expense due to the necessity of maintaining extra, unused storage space to handle the emptied liquid.

The actual intent of the filling, refilling and emptying provisions is to prevent the liquid level from fluctuating while a roof is resting on its supports, because fluctuations in the liquid level generate excess emissions. Emissions are minimized when liquid in a tank is lowered continuously, or in stages, and when the liquid

level is raised continuously during filling to a point where the roof is floating off its supports.

The CAR clarifies the ambiguity surrounding the procedures for filling, refilling, and emptying of storage vessels. *The CAR clearly states that when the liquid level drops below the roof supports during normal operation, the event is not considered emptying.* "Emptying" means the process of complete removal of stored liquid. In other words, "emptying" means you purposefully removed all of the stored liquid; it does not mean that some of the stored liquid was removed as a result of operational fluctuations in stored liquid volume.

Examples of normal operation that might necessitate lowering the liquid below the roof supports include changing stored material or transferring material out of a vessel for shipment.

Resting a roof on its supports while a tank is in service is an infrequent occurrence. However, the CAR's clarification of filling, refilling, and emptying provides operations relief to the owner or operator who has unforeseen inventory problems that force the liquid level to drop below the roof supports. To minimize emissions when the roof is resting on its supports, the CAR requires the process of refilling to be continuous. This means that once the process of filling or refilling begins, it must be continuous until the roof is raised off the leg supports, it cannot be lowered again.

The CAR also saves text by defining the terms IFR type A failure, IFR type B failure, and EFR failure only once, rather than repeating explanations of what a type of failure is each time reference is made to that failure. The primary difference between IFR type A and type B failures is that type A failures are those discovered during visual inspections of an internal floating roof through roof hatches, while type B failures are those discovered during internal inspections of the internal roof.

65.42 - 65.45

What are the storage vessel control requirements?

Control options.

Storage vessels that contain liquids with maximum true vapor pressures of less than 76.6 kilo-Pascal (10.9 pounds per square inch) can control emissions using an IFR or EFR, a flare or other control device, or by routing emissions to a process or fuel gas system. Storage vessels containing liquids with maximum true vapor pressures equal to or exceeding 76.6 kilo-Pascal do not have the option of using an IFR or ERF, but must comply with the standards

for control devices, including flares, or routing emissions to a process or fuel gas system.

Control efficiency.

Subpart C specifies a 95 percent reduction control efficiency for control devices. For control devices, including flares, and when routing emissions to a process of fuel gas system, subpart C of the CAR references the control standards contained in subpart G. This structure reduces the amount of text required for the regulation. For example, the flare provisions do not have to be listed in multiple places throughout the CAR.

Downtime for planned routine maintenance.

The CAR also standardizes the allowance for downtime for planned routine maintenance of control devices, including flares. In the referencing subparts, allowances for planned routine maintenance downtime vary from no allowance, to 72 hours per year, to 240 hours per year. By standardizing this allowance to 240 hours per year, the CAR provides more operational flexibility.

EFR converted into an IFR.

The CAR also allows the option of complying by using an external floating

Planned Routine Maintenance Downtime Allowances:

- 40 CFR part 60, subpart Ka → no allowance
- 40 CFR part 60, subpart Kb → no allowance
- 40 CFR part 61, subpart Y → 72 hours
- 40 CFR part 63, subpart G → 240 hours

CAR → 240 hours

roof converted to an internal floating roof. This concept is contained in the HON, but not in the other storage vessel referencing subparts. This clarification has been extended to all storage vessels under the CAR to allow such HON tanks into the CAR without additional modifications. Section 65.45 indicates which provisions should be followed, but does not contain additional requirements.

Monitoring floating roofs.

The operational requirements in the CAR further clarify the requirements of the referencing subparts by specifying how floating roofs should be monitored. Each of the referencing subparts specify that IFRs and EFRs must float at all times. This has been interpreted by some to mean that continuous monitoring

is required, because no explicit provisions are provided for demonstrating continuous compliance. The CAR specifies that roofs should be inspected during annual inspections and at any other time the roof is viewed. This clarification provides a practical means to ensure that roofs float "at all times" and to achieve the environmental protection intended by the referencing subparts in a manner less burdensome to the industry.

Safety considerations.

Another significant reduction of burden provided by the CAR is an allowance for more time, if necessary, to make repairs of storage vessels and measurements of seal gaps in vessels when unsafe conditions exist. Several of the referencing subparts only allow one extension of 30 days to empty a vessel and remove it from service if it cannot be repaired within 45 days. Also, other than the HON, the referencing subparts do not include provisions for performing seal gap measurements on unsafe vessels. In both these instances, the CAR allows up to two extensions of 30 days each to empty a vessel, remove it from service and repair it or perform seal gap measurements. The CAR does not require prior approval for the extensions, but the owner or operator is required to document the basis for the extension and retain records of repairs and report them in the next periodic report.

Putting an out-of-service vessel back into service.

The CAR provides one other reduction of burden for subpart Ka and Kb sources. When a vessel is refilled after having been out of service for more than one year, subparts Ka and Kb require seal gap measurements to be performed within 60 days of refilling. The CAR allows 90 days for the seal gap measurements, as do the HON and subpart Y. Thus, the CAR reduces the burden and allows more flexibility for subpart Ka and Kb sources, while standardizing the requirement for all sources.

65.46

How do I request an alternative means of emission limitation?

Section 65.46 refers the reader to the general provisions in subpart A of the CAR. In the general provisions at § 65.8, the CAR provides details about public hearings and Federal Register publication requirements, about the content of the submittals, and about compliance with any approved alternative.

65.47 - 65.48

What are the major recordkeeping and reporting provisions?

Storage vessel records.

The CAR streamlines the recordkeeping for inspections. For example, subpart Kb requires records of the condition of each component inspected. The CAR only requires a record that an inspection has been performed on a specific vessel, the date of the inspection, and a reference to the type of inspection

performed. The CAR also requires a description of a component's condition, but only if a problem is detected.

In conjunction with the newly revised language that clarifies the filling and emptying issue (see discussion regarding definitions, section 65.41), a new record was created in the CAR. This minimal record (the owner or operator must maintain a record for each storage vessel that identifies the date when the floating roof came to rest on its supports and the date when the roof was re-floated) is necessary to track vessel operation under the new CAR provisions. The EPA believes the benefits of added operational flexibility and the clarification of the requirements for emptying vessels outweigh the slight additional burden of this new record.

Storage vessel reports.

Several reporting burden reductions are provided by the CAR. Burden reductions are associated with the timing of submittals of defect inspections, seal gap measurement results, and seal gap exceedences. Subparts Ka, Kb, and Y require these notices to be submitted either 30 days or 60 days after the inspection, depending on the regulation. The CAR allows submittal of these reports in the semiannual report, as does the HON. This consolidation of submittals provides a reporting burden reduction for subpart Ka, Kb, and Y sources.

For refilling a vessel that has been emptied and for seal gap measurements of EFR, the CAR does not require notifications to be sent to the EPA, but only to the relevant State or local agency. The rule also provides an option for notification when unplanned seal gap measurement occurs. States and local agencies use these reports when planning to observe refilling operations or seal gap measurements when they are the delegated authority. States and local agencies may also waive these notifications.

Finally, the CAR requires less information for seal gap measurement reports than the HON. The HON requires reports of the raw data and calculations of each seal gap measurement. The CAR relieves this burden by only requiring the results of gap measurements that indicate noncompliance. Vessels that are in compliance need only be listed. The EPA believes that reporting the more detailed raw data is unnecessary because it is retained as an onsite record.

2.3 Summary of the CAR - Process Vents

How is the process vents section organized? Subpart D of the CAR provided a significant opportunity to consolidate the referencing subparts, because each of the existing rules is similar in structure and requirements. Subpart D contains all the provisions for process vents, including:

- process vent performance standards;
- determining if control, monitoring, or neither is required (group determination procedures);
- making Total Resource Effectiveness (TRE) index value determinations;
- requirements for process changes; and
- monitoring, reporting, and recordkeeping requirements for vents complying without either a recovery or control device.

Process Vents Referencing Subparts:

NSPS process vent subparts

- 40 CFR part 60, subpart III (air oxidation process vents)
- 40 CFR part 60, subpart NNN (distillation process vents)
- 40 CFR part 60, subpart RRR (reactor process vents)

HON process vents

- 40 CFR part 63, subpart G (HON process vents)

Vents that comply by using recovery or control devices are also subject to subpart G of the CAR, which contains further provisions regarding operation, monitoring, recordkeeping, and reporting for control and recovery devices.

65.60

What process vents are subject to the CAR?

Subpart D is structured so that owners and operators of process vents can use the CAR to determine whether or not control is required. This structure allows significant consolidation and simplification in the TRE index value calculations, which are integral to making the control determination.

65.61 - 65.62

How does the CAR classify process vents?

The nomenclature used in the referencing subparts to refer to vent group status can be confusing and difficult to understand, because the referencing subparts use different language to describe the classifications of

vents. For example, the NSPS referencing subparts contain long text descriptions that repeatedly cite TRE index value, concentration, and flow rate every time the language refers to a vent classification. The HON uses the simpler designations "Group 1" and "Group 2" to distinguish process vents that require control from those that do not. But the HON also uses long descriptions repeatedly to distinguish Group 2 process vents where monitoring is required from Group 2 process vents where monitoring is not required.

To simplify the language, the CAR clarifies and standardizes the nomenclature used to refer to vent classification. The CAR establishes three "group" classifications for process vents. In the CAR, "Group 1" process vents must be controlled, "Group 2A" process vents do not have to be controlled but must be monitored, and "Group 2B" process vents do not have to be controlled or monitored. By creating the classification of Group 2A and Group 2B process vents, the CAR eliminates several paragraphs of text each time a Group 2 vent is referenced.

This change provides for less text and makes the rule easier to read and understand. This added clarity should result in better compliance and should facilitate enforcement. The consistent terminology used throughout the CAR also reduces confusion in recordkeeping and reporting and makes it easier to classify specific vents.

Organization of Subpart D:

Subpart D

- Group determination
- Performance
(control requirements refers to subpart G)
- Group status change
- Group 2A and 2B monitoring, recordkeeping, and reporting

CAR Process Vent Group Status Summary:

Vent Stream Characteristic	Group Assignment		
	Group 1	Group 2A	Group 2B
TRE index value	≤ 1.0, and	> 1.0 and ≤ 4.0, and	> 4.0, or
Flow rate	≥ 0.011 scmm, and	≥ 0.011 scmm, and	< 0.011 scmm, or
Pollutant concentration ^a	≥ 300 ppmv TOC, or ≥ 50 ppmv HAP	≥ 300 ppmv TOC, or ≥ 50 ppmv HAP	< 300 ppmv TOC, or < 50 ppmv HAP
Requirements	Control required	No control required; monitoring required	No control and no monitoring required

^a Process vents subject only to subpart III or subpart G are not eligible for the 300 ppmv TOC concentration cutoff. Process vents subject to subpart G are eligible for the 50 ppmv HAP concentration cutoff. NSPS process vents are not eligible for the 50 ppmv HAP concentration cutoff.

65.63

What are the requirements for process vents?

Section 65.63 of the CAR contains the performance standards and group status change requirements for process vents, including performance standards for halogenated vent streams.

Group 1 process vents.

Group 1 process vents must be controlled. The CAR provides for control through flaring or through use of a control device. Control devices on Group 1 process vents must either reduce emissions by 98 weight percent or to an outlet concentration of less than 20 ppmv. This control must be achieved through a control device. Flares and control devices used in this manner are subject to subpart G of the CAR, which contains flare and control device design, monitoring, recordkeeping, and reporting requirements.

Alternatively, the CAR allows Group 1 process vents to be "controlled" by achieving and maintaining a TRE index value greater than 1.0 through the use of a recovery device (essentially creating a Group 2A or Group 2B process vent). This could be done by adding to the process a product recovery device such as condenser. The TRE index value determination is made following the final product recovery device.

Process Vent Performance Requirement Summary (§ 65.63):

- (a) Group 1 alternative performance requirements
 - (1) Flare
 - (2) 98 percent reduction or 20 parts per million by volume standard
 - (3) Achieve and maintain a TRE index value > 1.0
- (b) Halogenated Group 1 alternative performance requirements
 - (1) Halogen reduction device following combustion
 - (2) Halogen reduction device prior to combustion
- (c) Performance requirements for group 2A process vents with recovery devices
 - (1) Maintain TRE index value >1.0 , and
 - (2) Comply with requirements for recover devices
- (d) Performance requirements for group 2A process vents without recovery devices
 - (1) Parameter monitoring
 - (2) Demonstration methods and procedures
 - (3) Monitoring, recordkeeping, and reporting frequency
- (e) Group 2B alternative performance requirements
 - (1) Maintain TRE index value >4.0
 - (2) Maintain low flow rate
 - (3) Maintain low pollutant concentrations

Process Vent Group Status Change Requirements Summary (§ 65.63):

- (f) Group 2A or 2B process change requirements
 - (1) Flow rate
 - (2) Concentration
 - (3) TRE index value
 - (4) Group status change to Group 1
 - (5) Group status change to Group 2A
 - (6) Group status change to Group 2B

Therefore, the vent stream exiting the new condenser may meet the Group 2A or Group 2B requirements.

Additional details regarding control, and recovery devices can be found in section 2.6 of this document.

Like the HON, the CAR also prohibits flaring of halogenated vents and specifies that a halogen reduction device must be used if the process vent will be combusted. The CAR allows designating a Group 1 vent stream as halogenated without having to perform any testing or calculations.

Group 2A process vents.

Monitoring is required for Group 2A vents, but there are no control requirements. If a recovery device (for example, an absorber, condenser, or carbon adsorber) is being used to maintain the TRE index value above 1.0, then the design, monitoring, recordkeeping, and reporting requirements of subpart G apply.

Some Group 2A process vents meet Group 2A criteria without the use of a recovery device (in other words, the "natural" characteristics of the vent qualify it for Group 2A status). In this case, the standard monitoring

parameters listed in subpart G of the CAR for recovery devices do not apply and the CAR specifies that the owner or operator should determine the appropriate parameters to monitor. Under this case-by-case determination, the proposed monitoring parameters, monitoring schedule, and recordkeeping and reporting procedures are to be submitted to the Administrator for approval and would then become the provisions for the process vent(s) in question.

Group Status, Control, and Monitoring Requirements:

Group Status	Control Required?	Monitoring Required?
Group 1	Yes	Yes (under subpart G)
Group 2A (with or without recovery device)	No	Yes (under subpart G)
Group 2B	No	No

Group 2B process vents.

Neither monitoring nor control are required for Group 2B process vents. To maintain Group 2B status, the TRE index value must remain greater than 4.0 or the flow rate must remain below 0.011 scmm or the concentration must remain below the applicable criteria (see text box "CAR Process Vent Group Status Summary"). A process vent that qualified for Group 2B under one criterion can remain Group 2B following a process change as long as it still meets any one of the criterion (not necessarily the same one).

Process changes and group status.

The CAR specifies that the process vent characteristics must be recalculated upon process changes that "could reasonably be expected to change a Group 2A or 2B process vent to a Group 1 vent." Examples of these process changes include, but are not limited to, the following:

- changes in production capacity,
- changes in production rate,
- changes in feedstock type,
- changes in catalyst type, and
- replacement, removal, or addition of recovery equipment.

Various recordkeeping and reporting requirements are triggered following a group status change for a process vent, as outlined in § 65.63(f). In summary, the process vent must begin complying with the requirements of the new group status (see text box). Timing and extension provisions are included in the CAR.

65.64
What are the group determination procedures?

The provisions of section 65.64 provide the calculation and measurement methods for parameters that are used to determine group status. Most procedures are very similar to those presented in the referencing subparts, including the procedures for total organic compound (TOC) or HAP concentration, volumetric flow rate, and TOC or HAP emission rate. Some procedures are handled differently in the CAR, and they are discussed below.

Requirements Upon Making a Process Change

First, recalculate the process vent parameters in order to make a new group status determination:

- flow rate,
- concentration, and
- TRE index value.

Then, comply with the new process vent requirements:

Changed to a...	Comply by...	Extension Allowed?
Group 1	Initial startup	Yes (up to 3 years)
Group 2A	Completion of the group status determination	No ¹
Group 2B	As soon as practical	No

¹The group status determination must be completed within 180 days of the process change.

Locating sampling sites to determine vent group status.

The CAR includes the HON provisions regarding where to locate sampling sites to determine vent stream characteristics. The CAR specifies that the sampling site should be located after the last recovery device but prior to the control device inlet and prior to atmospheric release.

The CAR does not incorporate the sampling site provisions of the NSPS process vent rules for vent streams that are mixed prior to venting to a control device. The NSPS provisions required a back-calculation of the effects of the control device on the individual streams in the mix. Under the CAR, no back-calculation is necessary. The efficiency of the control device when reducing emissions from mixed streams is a good indication of the efficiency of the control device to reduce emissions from individual streams.

Net heating value.

All of the process vent referencing subparts and the general provisions of 40 CFR parts 60 and 63 contain a net heating value equation. However, some of these equations specify the concentration to be calculated on a wet basis while others specify a dry basis and include a correction for the water vapor content of the vent stream. Because the wet basis form for the equation is used more prevalently, the CAR specifies the equation for wet basis concentrations. (Both forms of the equation provide the same result, however, if they are applied correctly.)

Halogenated vent stream determination.

The CAR consolidates the HON definition of a halogenated vent stream. This definition specifies that a process vent stream is considered halogenated when the mass emission rate of halogen atoms contained in the organic compounds is equal to or greater than 0.45 kilogram per hour.

This is a potentially important issue for the small subset of halogenated process vents that are subject to an NSPS process vent rule but not subject to the HON. For purposes of calculating the TRE index value under the NSPS process vents rules, a stream is considered halogenated if it contains 20 ppmv or greater halogens. A halogenated vent in the NSPS rules could potentially become a non-halogenated vent in the CAR, and vice versa. The TRE index value is a function of whether a vent stream is halogenated or not. If a group status changes because of the CAR, a different control and/or monitoring requirement may be triggered than that triggered by the referencing subpart.

Also, note that the CAR requires halogen reduction devices, such as scrubbers, to be installed on halogenated process vents. A vent stream that was not considered to be a halogenated process vent under the NSPS may be considered a halogenated process vent under the CAR; to opt into the CAR, a halogen reduction device would be required to be installed.

Engineering assessment.

In some situations, the CAR allows engineering assessment in lieu of testing to determine vent stream characteristics. Engineering assessment is allowed when determining vent stream flow rate and concentrations, TRE index value for verifying Group 2B status, and halogenated vent stream status. The NSPS referencing subparts only allow engineering judgement for TRE index value determination after a process change is made, but not for initial determination of vent characteristics. The HON also does not allow use of engineering judgement for the initial determination of concentration and flow rate to verify Group 2B status.

Compared to testing, engineering assessment is a less burdensome approach to determining vent stream characteristics. Any process vent with an estimated TRE index value between 1.0 and 4.0 (Group 2A) must be tested and is potentially subject to control. Thus, allowing engineering assessment for verifying Group 2B status does not decrease environmental protection, but allows facilities to focus attention on vents where control and monitoring is expected to be required.

65.65 - 65.67

What types of monitoring, recordkeeping, and reporting are required?

Sections 65.65 through 65.67 of the CAR contain the monitoring, recordkeeping, and reporting provisions for process vents. Most monitoring, recordkeeping, and reporting is consolidated in subpart G of the CAR. Subpart D provides for the following:

- Monitoring, recordkeeping, and reporting for a Group 2A process vent without a recovery device,
- Records of TRE index value determinations,
- Records of flow rate determinations,
- Records of concentration determinations,
- Records of process changes,
- Initial compliance status report contents, and
- Process change report contents (can be included in periodic reporting).

The CAR does not require reporting of the criteria under which each Group 2B process vent qualifies. As a burden reduction, the CAR only requires that the reporting identify which process vents are Group 1, Group 2A, and Group 2B.

This reporting requirement operates in conjunction with the CAR's burden reducing approach to reporting process changes. When a process change is made and it does **not** result in an upgrade to the group status (Group 2B to Group 2A, or Group 2A to Group 1), the CAR only requires a statement to that effect. If a process vent that meets one criterion for Group 2B status undergoes a change and now meets another criterion for Group 2B status, no report is required; by contrast, the referencing subparts required test results, engineering assessments, or the like. However, all records of calculations after a process change are still required to be kept.

2.4 Summary of the CAR - Transfer Racks

How does the CAR regulate emissions from transfer racks?

After synthetic organic chemical products are manufactured at a SOCOMI facility, the products are often stored in final product storage tanks. From there, the material can be transferred from the storage vessels into tank trucks or railcars for delivery off-site. Material passes from the storage vessel through a *transfer rack* into the tank truck or railcar.

Transfer Rack versus Transfer Operation:

The referencing subparts differ in terminology for the procedure of transferring material into a tank truck or railcar -- transfer operations, loading racks, transfer racks, etc. The CAR consolidates on the term "transfer rack" to refer to this procedure. This standardization in terminology is a clarifying change but is not a substantive change in requirement.

The CAR provisions for transfer racks are contained in subpart E of part 65 and are based on the transfer provisions in the HON. Subpart BB of 40 CFR part 61 (benzene transfer rack NESHAP) is the only other referencing subpart that contains provisions for transfer. By incorporating the compliance options and flexibility of the HON, the CAR transfer rack provisions provide some significant burden reductions to transfer racks referenced from subpart BB. The provisions also incorporate some burden reductions for transfer racks referenced from the HON (as discussed in the remainder of this section of the document).

Note that marine vessel loading under subpart BB is not incorporated into the CAR and is therefore ineligible to use part 65. Although the provisions are somewhat similar, marine vessel loading through

transfer racks is an operation that falls outside the scope of the CAR. The HON does not contain any provisions for marine vessel loading.

How is the transfer racks subpart organized?

In the referencing subparts, transfer rack provisions are often stated in a "design and operate" format. For example, a provision might require that a transfer rack be designed and operated in such a manner that emissions are routed to a control device. In keeping with the CAR's audience-friendly approach, the transfer subpart is divided into distinct sections targeted at the persons designing the transfer rack, the persons operating the transfer rack, and the persons responsible for monitoring, recordkeeping, and reporting. These tasks are often the responsibility of different and distinct personnel.

Transfer Rack Referencing Subparts:

- HON -- 40 CFR part 63, subpart G
- Benzene transfer NESHAP -- 40 CFR part 61, subpart BB

Transfer racks that comply by using a closed-vent system routed to a control device (or by routing collected vapors to a process or a fuel gas system) are further referenced to subpart G of the CAR, which contains the consolidated provisions regarding operation, monitoring, recordkeeping, and reporting for control and recovery devices (and routing emissions to the process or a fuel gas system).

Definition of closed-vent system:

A closed-vent system is a "system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device.

A closed-vent system does not include the vapor collection system that is part of any tank truck or railcar or the loading arm or hose that is used for vapor return.

For transfer racks, the closed-vent system begins at, and includes, the first block valve on the downstream side of the loading arm or hose used to convey displaced vapors."

65.80

How does the CAR treat transfer rack applicability?

Transfer racks subject to control requirements under the HON or subpart BB are eligible to use the CAR to comply with emissions control requirements. If a physical or process change is made that cause a transfer rack to fall outside the criteria in the referencing subpart that required the transfer rack to control

emissions of regulated material in the first place, you may elect to comply with provisions for transfer racks not subject to control contained in the referencing subpart instead of the CAR. (Note that a transfer rack below the cutoff is still subject to the referencing subpart; it is not, however, subject to control.) The piping leading to the process or fuel gas system is not considered a closed vent system, and fuel gas systems are excluded from the definition of control devices. Thus, the CAR allows exemptions for transfer racks routed to processes or fuel gas systems.

65.81
What new definitions are important for transfer racks?

The CAR clarifies the definitions closed-vent system and vapor balancing system.

Closed-vent system.

The CAR uses the language "closed-vent system" to describe the equipment that collects and transports transfer rack emissions from emission points to control devices. The HON uses the term "vapor collection system" instead of closed-vent system to distinguish the portion of the transfer rack that may not be considered part of the closed-vent system. The CAR only contains the term "closed-vent system," but it clarifies in the definition (see textbox) exactly what is considered to be included in the closed vent system.

Vapor balancing systems.

Vapor balancing systems are piping systems that collect regulated material vapors that are displaced during loading and then route those vapors to the storage vessel that is supplying the liquid that is being loaded (or to another storage vessel connected by a common header). Vapor balancing systems are not subject to the closed-vent system equipment leak provisions. Vapor balancing systems are considered part of the process; therefore, they are subject to the general process equipment leak provisions of subpart F of the CAR.

Closed-vent systems versus vapor balancing systems.

Consistent with the overall structure of the CAR, the requirements for the closed-vent system portion of a transfer rack are contained in subpart G of the CAR. Note that because a vapor balancing system is considered to be process piping, vapor balancing systems are *not* referred to subpart G of the CAR for additional control. (They are also exempt from certain other provisions of the transfer racks subpart; see § 65.82.)

Maintaining and clarifying the distinction between the closed-vent system and the vapor balancing system is a helpful feature of the CAR; it is easier for owners and operators to know which set of inspection provisions apply to given portions of their processes.

65.82

What are the transfer rack design requirements?

The CAR requires that transfer racks be equipped with:

- a closed-vent system that routes vapors to a control device or flare (subpart G of the CAR also applies); or
- process piping that routes vapors to a process or a fuel gas system (subpart G of the CAR also applies); or
- process piping that routes vapors to a vapor balancing system (subpart G of the CAR *does not* apply).

Section 65.82 contains design requirements for the compliance alternatives. It also contains references to subpart G of the CAR where appropriate.

65.83

What about transfer rack performance requirements?

The CAR requires all control devices to reduce emissions of regulated materials by 98 weight-percent or to an exit concentration of 20 ppmv, whichever is less stringent. The reduction or concentration must be calculated on a dry basis, corrected to 3 percent oxygen for combustion devices. Since subpart BB does not contain the option of reducing emissions to a 20 ppmv exit concentration, the CAR provides these sources with an alternative means of compliance.

The 20 ppmv compliance option is a feature of more modern rules. Achieving a 98 weight-percent reduction of a vent stream that initially has a very low concentration can be infeasible or even cost prohibitive. Allowing a 20 ppmv concentration provides operational flexibility without compromising environmental protection. Nevertheless, all control devices, including flares, must also meet the applicable requirements of subpart G.

65.84

What about transfer rack operating requirements?

The CAR adopts the control requirements of the HON for halogenated transfer rack vent streams. These requirements are similar to those for process vents (as discussed in section 2.3 of this document). The requirements for halogenated vent streams are new for subpart BB sources. However, because very few transfer racks that are subject to subpart BB are expected to contain halogens, the EPA does not expect this requirement to be unduly burdensome to those sources.

The CAR provides simple, straight-forward instructions for transfer rack operating requirements.

- Transfer racks must either operate a closed-vent system that routes vapors to a control device or they must use process piping that routes vapors to a process or fuel gas system or to a vapor balancing system.
- Control devices must be operating when emissions are vented to them.
- Tank trucks and railcars must have current vapor tightness certifications (see § 65.84 for details).
- Pressure relief devices must not begin to open to the atmosphere during loading (relief devices used for safety purposes are not subject to this requirement).
- Tank trucks and railcars must be equipped with vapor collection systems that are compatible with the transfer rack's closed-vent system or process piping.
- Tank trucks and railcars will be loaded only when their collection systems are connected to the transfer rack's closed-vent system or process piping.

65.85

What procedures are specified in the transfer rack subpart?

Three procedures are given for the CAR transfer rack provisions of subpart E.

Vapor tightness demonstration.

The CAR allows two alternatives for demonstrating tank truck or railcar vapor tightness. Source operators may rely on either a Department of Transportation (DOT) tank certification or Method 27 test results and documentation. The HON incorporates both of these alternatives, but subpart BB does not incorporate the DOT certification option because it was drafted prior to the DOT certification program. Owners and operators are already required to keep the DOT certifications under DOT regulations. Under the CAR, sources will not have to perform Method 27 in addition to keeping the DOT certification. This is a potential burden reduction for subpart BB sources because subpart BB required several ancillary records related to Method 27. The records needed for the DOT certification are much simpler.

Engineering assessment.

Engineering assessment, which is a feature of the HON but is not contained in subpart BB, is incorporated into the CAR. Under the transfer racks subpart of the CAR, engineering assessment can be used to determine if a vent stream is halogenated or to calculate the flow rate of a gas stream.

Halogenated vent stream determination.

The procedures for determining if a vent stream is halogenated are essentially identical to those presented in subpart D of the CAR for process vents. See section 2.4 of this document for additional information about the halogenated vent stream determination procedures.

65.86 & 65.87

What are the transfer rack monitoring, recordkeeping, and reporting provisions?

Monitoring.

The transfer rack monitoring section in the CAR (see § 65.86) refers to the requirements specified in subpart G of the CAR [see § 65.142(c)]. Essentially, subpart E of the CAR contains no monitoring requirements; it does contain a reference to subpart G as a reminder that if subpart G is applicable, then subpart G will specify the required monitoring.

Recordkeeping.

The recordkeeping requirements of subpart E of the CAR consist only of maintaining records of the vapor tightness certification for the tank trucks and railcars. Note that if subpart G is applicable, then some additional recordkeeping may apply.

The CAR does not require that records be kept of the liquids transferred through each transfer rack. This requirement is found in the referencing subparts, and the intent is to ensure that the liquids being transferred do not trigger any control requirements for the transfer racks. This requirement is not necessary for sources complying with the CAR, because control is required for all transfer racks complying with the CAR.

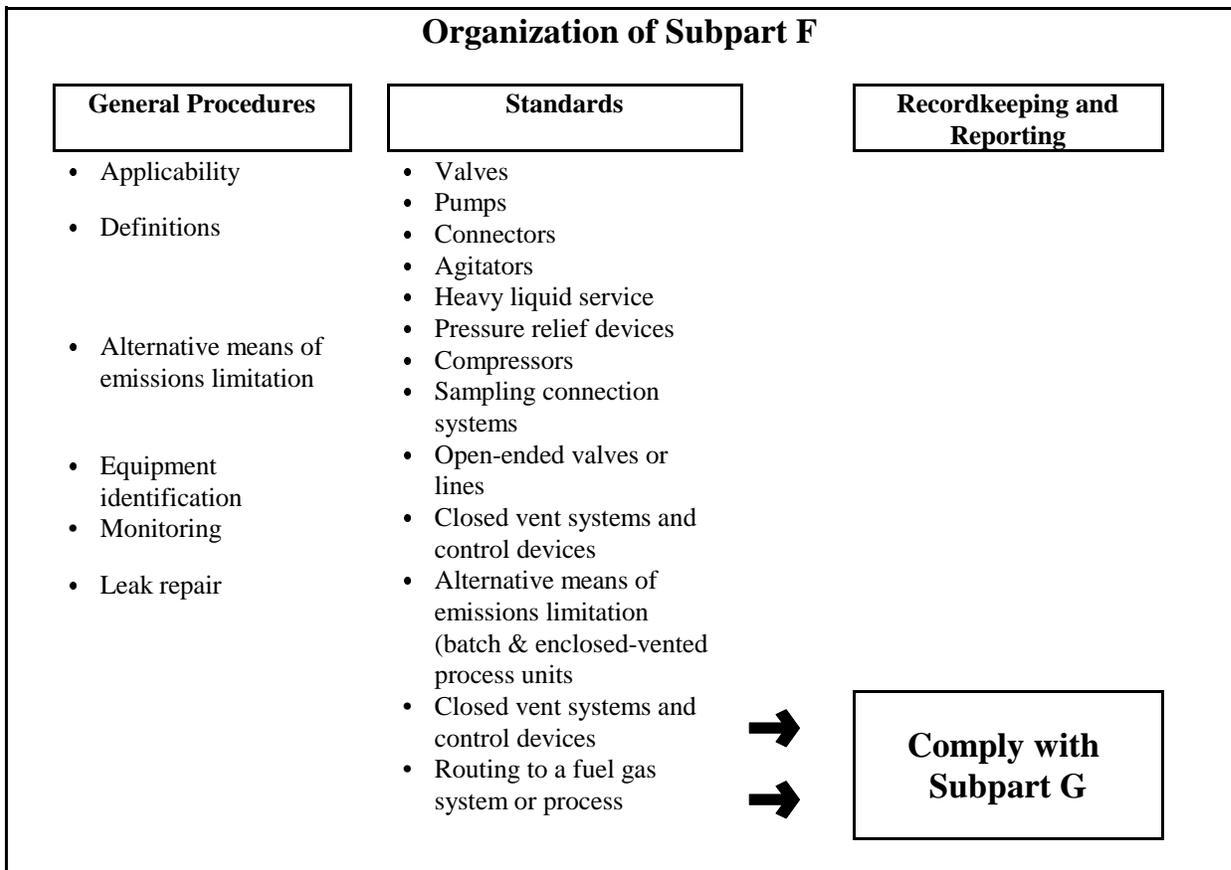
Reporting.

Subpart E of the CAR contains no reporting requirements. Note that if subpart G is applicable, then some reporting requirements may apply.

2.5 Summary of the CAR - Equipment Leaks

How is the equipment leaks section organized?

The equipment leaks subpart of the CAR, subpart F, is broken into 3 main divisions; general procedures, standards, and recordkeeping and reporting. These divisions were created to make the equipment leak rules easier to read, easier to navigate, and more focused on the target reader. For example, monitoring for leaks and leak repair are presented separately from the equipment standards because the personnel at a plant site responsible for these activities are not necessarily the same. Personnel responsible only for monitoring and/or repairing equipment leaks do not have to read through each of the sections to find the appropriate procedures; all of the monitoring and leak repair provisions are contained in a generalized section prior to the individual equipment standards. Similarly, personnel only responsible for recordkeeping and reporting will find all the information needed for generating the required records and reports in the sections at the end of the subpart.



This format also allows for a reduction in the amount of regulatory text. For example, equipment identification provisions are presented once, rather than duplicated for each equipment type (pumps, valves, et. al.) discussed in the standards section. Also, taking advantage of the overall structure of the CAR, detailed provisions regarding routing emissions through a closed-vent system to a control device or regarding routing emissions to a process or fuel gas system are presented only once, in subpart G. Where control devices or routing to a process or fuel gas system is allowed, subpart F simply provides the reader with some details necessary for equipment leaks and then refers the reader on to subpart G. This avoids each appropriate section of subpart F needing to have all of the details contained in subpart G.

Goals of the CAR Equipment Leaks Structure:

- Isolate and emphasize the different procedures,
- Present the requirements in a manner more consistent with typical plant operation,
- Create a more "user-friendly" format, and
- Avoid repetition of requirements.

An additional restructuring was achieved by creating a parallel construction for the equipment component sections which have similar types of provisions.

Equipment Leak Referencing Subparts:

- subpart VV: 40 CFR part 60, subpart VV
- subpart V: 40 CFR part 61, subpart V
- the HON: 40 CFR part 63, subparts F and H

The following standards all have similar types of provisions:

- valves in light liquid service,
- pumps in light liquid service,
- connectors in gas/vapor service and in light liquid service,
- agitators in gas/vapor service and in light liquid service, and
- pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in liquid service; and instrumentation systems.

Most of these standards have provisions for the following:

- compliance schedule,
- leak detection,

- percent leaking component calculations,
- leak repair (any special provisions not covered by the general leak repair section), and
- other equipment-specific provisions and alternatives.

These sections are all ordered in the same way; this consistent structure enables the owner or operator to more easily understand the requirements for each component, more quickly find any given requirement for a specific component, and more thoroughly coordinate compliance activities.

65.100

What are the applicability provisions for equipment leaks?

The CAR spells out in detail in § 65.103(a) that only the equipment subject to the referencing subpart is subject to the CAR. For example, even though the CAR contains provisions for agitators, the agitator provisions would not apply to a source only to subpart VV because agitators are not covered by subpart VV. This concept is also explained in the CAR general provisions at § 65.1(d).

Only equipment covered under the referencing subpart is subject to control under the CAR. However, the control requirements for equipment opting into the CAR are not necessarily the same as those in the referencing subpart.

Applicability:

The CAR does NOT introduce requirements to any equipment that was not previously subject to a referencing subpart.

What's new?

- Lists of equipment to which rules do NOT apply
- Exceptions for equipment in service <300 hours per year

Regarding applicability, the CAR specifically exempts the following equipment:

- equipment in vacuum service,
- equipment intended to be in regulated material service less than 300 hours per calendar year,
- lines and equipment not containing process fluids, and
- utilities and other nonprocess lines such as heating and cooling systems that do not combine their material with those in the process they serve.

Subparts V and VV do not explicitly list equipment to which the rules are inapplicable. To further clarify the intent of the referencing subparts, the CAR does list

some common equipment that is exempt.

The exemption for equipment intended to be in regulated material service less than 300 hours per year is a new exemption for sources referenced from

subparts V or VV. This is a burden reducing exemption based on a similar provision in the HON.

65.101

What new definitions are important for equipment leaks?

Regarding definitions, six significant changes were made to the equipment leak definitions, and one new definition was introduced. (Note that no definitions are included in subpart F, as all definitions for the CAR are contained in the general provisions at § 65.2.)

Closed-vent system.

The CAR includes "ductwork" under the definition of a closed-vent system. (Note that this change was also added to subparts V and VV.) Previously, the definition specified that a closed-vent system consisted of "piping, connections, and ... flow inducing devices." This new definition clarifies the original intent by explicitly allowing ductwork in addition to hard-piping. (Note that ductwork and hard-piping have different inspection requirements under subpart G of the CAR.) Also, the CAR definition clarifies that a "closed-vent system does not include the vapor collection system that is part of any tank truck or railcar."

First attempt at repair.

The CAR uses the HON definition, which clarifies the subpart V and VV definitions by specifying that the first attempt at repair includes a verification check.

In regulated material service.

This term means different things depending on the specific referencing subpart to which the equipment was originally subject (see text box).

"In regulated material service" means:

- for subpart VV, contains greater than 10 percent by weight volatile organic compounds (VOC);
- for subpart V, contains greater than 10 percent by weight volatile hazardous air pollutants (VHAP); and
- for the HON, contains greater than 5 percent by weight total organic hazardous air pollutants (HAP).

Open-ended valve or line.

Relief devices, the broader category of devices needed for safety purposes or equipment protection, are not considered open-ended valves. The CAR, therefore, specifically exempts "relief valves" in the definition of "open-ended valve or line" instead of exempting "pressure relief valves" as was done in the HON and 40 CFR part 61, subpart V.

Process unit shutdown.

The CAR uses the HON definition, which is clearer than the subpart V and VV definitions because it includes more examples and descriptions that identify exactly what is and what is not considered a process unit shutdown.

Repair.

The CAR incorporates the HON definition, which specifies that to be considered "repaired," follow up monitoring must be performed. In conjunction with the text in the standards, this change to subparts V and VV clarifies the actions that must be taken to repair a leak.

65.102

What are the alternative means of emission limitation?

The provisions of § 65.102 supplement those of the general provisions in subpart A of the CAR. In the general provisions at § 65.8, the CAR provides details about public hearings and Federal Register publication requirements, about the content of the submittals, and about compliance with any approved alternative. In the equipment leaks section, more specific detail regarding equipment leak petitions for alternative means of emission limitation are provided.

Alternative means of emission limitation are not applicable to performance standards. A performance standard is a numerical limit which applies to emissions from a source; no special alternative provisions are needed when specified numerical limits are given in a standard because a facility can always conduct a performance test showing that the control measure meets the performance standard. The CAR language specifies that requests for alternative means of emission limitations for performance standards are not appropriate. The CAR also identifies, in the alternative means of emission limitation section, which provisions of the equipment leaks subpart are performance standards.

In addition, the CAR language clarifies that once an alternative is approved, the owner or operator has the choice of complying with the rules as written in part 65 or the approved alternative to those rules. Note that compliance with

one scheme versus the other will likely have implications to the title V permit of the facility.

65.103

What are the new and improved equipment leaks identification provisions?

Section § 65.103 is broken into 3 main areas (general equipment identification, additional equipment identification, and special equipment identification) for clarity and reduction of repetitive text.

General Provisions.

General equipment identification is the default provision for all equipment subject to this subpart. It simply states that "equipment subject to this subpart shall be identified." Examples of acceptable identification are provided, but the rule is explicit that physical tagging of the equipment is not required. The intent is for the owner or operator to have some identification scheme that not only readily distinguishes which equipment is subject to subpart F but that also makes sense at a given facility.

Equipment Identification Section Organization:

- General Provisions
- Additional Provisions
 - connectors
 - instrumentation systems, etc.
- Special Provisions
 - unsafe-to-monitor equipment
 - unsafe-to-repair equipment, etc.

The general equipment identification provisions of the CAR only require the plant to have some kind of indication as to which equipment is subject to subpart F and which is not. This can be an identification on the plant site plan, a log entry, some form of weatherproof designation of process unit boundaries, or any other appropriate method (including traditional weatherproof tagging of individual pieces of equipment with unique identification numbers). It should be noted that area identification will be interpreted that all applicable equipment within the designated area is covered by the rule.

The CAR assumes that the personnel with the responsibility of identifying each piece of equipment will also be involved with the decision to (for example) mark a piece of equipment as unsafe- or difficult-to-monitor. These provisions for special equipment identification are therefore likewise consolidated in this section instead of being spread throughout the standards.

Additional Provisions.

Additional equipment identification applies where provisions of this subpart require additional or alternative identification; in most cases, this additional identification is all that is required for the piece of equipment. There are additional equipment identification provisions for:

- connectors,
- equipment referenced to subpart G,
- pressure relief devices equipped with rupture disks,
- instrumentation systems, and
- equipment in service less than 300 hours per year.

Special Provisions.

Special equipment identification applies where there are programs requiring special identification procedures, including the following:

- unsafe-to-monitor equipment,
- difficult-to-monitor equipment,
- equipment that is unsafe to repair,
- compressors operating with an instrument reading < 500 ppm, and equipment in heavy liquid service.

65.104 & 65.105

How are the leak detection and repair provisions consolidated?

In the equipment leak referencing subparts, each individual equipment standard provided information concerning how to monitor, what results constituted a leak, and which procedures must be followed upon discovering a leak. Much of this information is duplicative.

In the CAR, two sections, § 65.104 (Instrument and sensory monitoring for leaks) and § 65.105 (Leak repair), consolidate all of the procedures for monitoring and for leak repair.

In addition to consolidation, the CAR includes some additional features:

- Some instruments cannot meet the Method 21 performance criteria which are specified to be followed. The CAR includes details on how to adjust readings for these instruments.
- The CAR allows calibration of the monitoring instrument to be performed with gases other than methane or n-hexane if the instrument does not respond to either of these compounds.

- The CAR allows monitoring to be performed whenever a detectable material is present; it drops the redundant and confusing option to monitor when an "acceptable surrogate VOC" is present.
- The CAR further clarifies the original HON language regarding using historical monitoring data to justify extended monitoring periods by indicating that (1) earlier data may be used only for initial qualification, and (2) this provision includes initially qualifying for annual monitoring.
- The CAR also includes an option of routing purged material to a process or fuel gas system during a delay in repair for valves, connectors, and agitators to increase operational flexibility.

Leak Detection and Repair Structure:

- | | |
|-------------------------------|-----------|
| • Monitoring for leaks | 65.104(a) |
| - Instrument | |
| - Methods | 65.104(b) |
| - Results & background | 65.104(c) |
| - Sensory | 65.104(d) |
| • Leaking equipment | 65.104(e) |
| - Identification | |
| - Records | |
| • Leak repair schedule | 65.105(a) |
| • Leak identification removal | 65.105(c) |
| • Delay of repair | 65.105(d) |
| - Unsafe-to-repair connectors | 65.105(e) |
| • Leak repair records | 65.105(f) |

The CAR clarifies language dealing with repair of leaks. In general, leaks must be repaired within 15 days of detection, unless the leak qualifies for delay of repair. Provisions in all three referencing subparts allow for delay of repair "...if the repair is technically infeasible without a process unit shutdown." This language potentially discourages any attempts at repair between the 15th day after detection and the next process unit shutdown, since a successful repair within that period would then disqualify one from the original delay of repair. Some equipment leaks legitimately qualify for delay of repair, yet they can be repaired after the 15-day repair deadline and before the next process unit

shutdown. These repairs can be effected by continued repeat attempts over time until the leak is repaired. In order to eliminate the potential disincentive to attempt repair of leaks after the fifteenth day, the CAR revises the wording of this provision to state that delay of repair is allowed if repair "within 15 days after a leak is detected" is technically infeasible without a process shutdown.

An additional burden reduction and clarification is achieved by incorporating the HON definition of "repair" with the leak repair requirements. Both 40 CFR part 61, subpart V and 40 CFR part 60, subpart VV require valve monitoring for two successive months before the leaking valve identification can be removed. The CAR follows the HON language and allows the removal of the identification after the valve is "repaired," which by definition includes follow-up monitoring.

The CAR also adopts the HON provisions for records of delay of repair, allowing owners and operators to develop written procedures for delay of repair and to simply cite relevant sections of their written procedures as the record of reason for delay.

Alternative Monitoring Program for Valves:

- The alternative monitoring program for valves can substantially reduce monitoring burden.
- What's New?
 - Flexible "percent leaking valves" calculation
 - No credit for removed valves
 - No valve QIP

65.106

What's New With Valves?

The most significant difference between the equipment leaks provisions in the CAR and those in the referencing subparts is the CAR's innovative approach for monitoring valves for leaks. The CAR alternative monitoring program significantly reduces the amount of burden associated with monitoring valves for leaks without increasing the emissions of regulated pollutants to the environment.

What is the Alternative Monitoring Program?

The premise for the CAR alternative monitoring program for valves is that industry data and experience have shown that, at some facilities, some valve populations tend to leak more frequently than others. The referencing subparts require valve monitoring on a process unit basis, such that a certain number of valves that tend to leak

Alternative Monitoring Program for Valves:

- Subgroup valves across units by whatever scheme makes sense.
- Each subgroup then qualifies individually for valve monitoring frequency.

frequently may continually force all of the valves in the process unit to be monitored frequently. Separate process units can qualify for less frequent monitoring if the percent leaking valves in the process unit falls to a small enough number. The CAR alternative monitoring program extends this concept by allowing subgrouping, within or across process units, to determine the valves that must be monitored. Each subgroup qualifies for a specific monitoring frequency based on the percent leaking in that subgroup.

Under the CAR alternative, the owner or operator can place valves that are expected to leak more frequently into one subgroup. Because these valves are expected to leak more frequently they would be monitored more frequently. This is conceptually the same as the current programs which allow different monitoring frequencies for different process units, in that the performance of a given process unit does not disqualify another process unit from less frequent monitoring. The primary difference in the CAR alternative monitoring program is that subgrouping can be based on site-specific factors other than process unit boundaries.

The main benefit of the CAR alternative monitoring program is to allow facilities to focus on valves that tend to leak, while relieving the burden of monitoring valves that tend not to leak and achieving the same or better level of environmental protection provided by the referencing subparts. The cost of monitoring, which is a significant burden to the industry, is thereby reduced without creating a greater potential for negative environmental impact.

What safeguards for environmental protection are included?

Several safeguards have been built into the CAR alternative monitoring program to not only ensure that the level of environmental protection does not deteriorate, but also to provide incentives for each facility to continually improve the performance of its valves (by decreasing the number and occurrence of leaking valves).

- To initially qualify for the CAR alternative monitoring program, the overall performance of all valves in the alternative monitoring program must be less than 2 percent leakers.
- If the overall performance of the valves in the alternative monitoring program fails to meet the program's required 2 percent leak rate, as determined through semi-annual performance checks, the entire population of valves in the alternative monitoring program would revert

to the original valve monitoring program. As a result, each process unit would revert to the monitoring frequency dictated by the percent leaking valves observed. This may also introduce monthly monitoring for many valves. The EPA considers this possibility a significant incentive for owners or operators to maintain good performance at plant sites employing the subgrouping program.

- Valves with less than one year of monitoring data (or valves not monitored within the last 12 months) must initially be placed into the most frequently monitored subgroup.
- Switching valves between subgroups is allowed (as a necessary part of the program's success!), but there are some restrictions included designed to prevent circumvention. These provisions ensure that valves cannot be moved back and forth between subgroups to hide or diminish the impact of leaking valves on the percent leaking valves calculations.

How do I assign or reassign my valves to subgroups?

Under the proposed alternative, a valve can be moved into a less frequently monitored subgroup only when data have been collected that demonstrate that the valve has not leaked during the entire monitoring period of the subgroup to which it is moving (e.g., no leaks for the past 12 months before moving a valve into an annually monitored subgroup). Therefore, valves with a demonstrated lower incidence of leaks can migrate into the longer monitoring period subgroups. Because even a few leaking valves in a subgroup can disqualify the subgroup for the longer monitoring periods, it is anticipated that owners and operators will be very cautious when considering whether or not to move suspect valves into the longer monitoring period subgroup.

Valve subgroup reassignment:

For example, assume the following:

- Subgroup A - monthly monitoring
- Subgroup B - annual monitoring

- (1) To move a valve from Subgroup A to B:
 - must have 12 months of data showing that the valve has not leaked.
- (2) To move a valve from Subgroup B to A:
 - must have been monitored during the last annual monitoring, AND
 - must have its monitoring results included in Subgroup B's evaluation.

To move a valve into a more frequently monitored subgroup, the valve must have been monitored during the most recent monitoring period for the group it is moving from, and it must have had its monitoring results included with the group from which it is moving. The intent of this safeguard is

to prevent leaking valves from being shuttled out of a subgroup to protect that subgroup from triggering a more frequent monitoring period.

The placement and subsequent reassignment of valves into subgroups is a decision that will be made on a case-by-case basis by the owners and operators. The alternative program takes advantage of the knowledge of the process that the owner or operator possesses. At a given facility, for example, valves operating under certain temperatures or valves located adjacent to certain pieces of equipment may be more likely to leak. No single set of criteria can be applied to the entire industry, as the characteristics of valves that are more likely to leak at one facility will not be the same at another facility.

I'd like to implement subgroups. Are there any extra records or reports?

Some additional records and items to include in the periodic reports are necessary for this program to ensure compliance. These records and reporting items consist essentially of recording which valves are initially

assigned to each subgroup, which valves have subsequently been reassigned, and the results of the semiannual performance checks. The burden associated with retaining these records and making these reports is far outweighed by the savings in reduced monitoring.

What else is new to the valve equipment leak standards?

- **Extended monitoring period**

Another aspect of the valve program is the ability to earn longer monitoring periods with good performance. The HON currently allows a series of extended monitoring periods based on improved performance, culminating with an annual monitoring period for process units with less than 0.5 percent leaking valves. The CAR equipment leaks subpart introduces an additional 2-year monitoring period for process units with less than 0.25 percent leaking valves. This extended monitoring period would be available to valves

whether or not the owner or operator chooses to use the alternative subgrouping program for compliance. Since 0.25 percent of a typical valve population (either a process unit under the base monitoring program or a subgroup under the CAR alternative monitoring program) is a very small number of leaking valves, EPA considers this change a logical extension of the original monitoring periods specified in the HON. Furthermore, it has the potential to substantially reduce monitoring costs without increasing long-term emissions to the environment.

Valve monitoring periods:	
Leak Rate	Monitoring Period
2 percent or greater*	Monthly
1 percent to 2 percent	Quarterly
0.5 percent to 1 percent	Semi-annually
0.25 percent to 0.5 percent	Annually
0.25 percent or less	Biannually

* Actual cutoff is 2 percent of the valves or 2 valves, whichever is greater.

- **Flexible percent leaking valves calculation**

The CAR adds some flexibility to the calculation of overall percent leaking valves by allowing the calculation to be performed on either a single process unit or a group of process units. Owners or operators must commit to one of these approaches by their CAR implementation date, and perform all subsequent percent leaking calculations on the same basis. The basis may be changed through revision of the operating permit or other appropriate notification.

- **Credit for removed valves not incorporated**

The CAR simplifies the calculation procedure by not incorporating a partial credit for removed valves. The simplified equation, along with the reduction in burden associated with the alternative monitoring program and the extended monitoring periods, outweighs any negative aspects of not including the credit for removed valves.

- **No valve QIP**

The CAR does not contain provisions for a valve QIP program. Owners and operators are expected to be able to subgroup their valves such that valves with continuing problems will migrate into a single subgroup. This subgroup will likely be subject to monthly or quarterly monitoring. The additional focus paid to these valves by the subgrouping procedure, along with the financial incentive for facility owners and operators to better the performance of the subgroup, is adequate to insure that overall progress is being made.

65.107

How are the pump standards different?

The pump section has also been improved and clarified in two main areas; the procedures for conducting visual inspections and the recordkeeping associated with weekly visual checks.

Visual inspection procedures are first introduced in the pumps standard. "Visual inspection" is used in this document interchangeably with phrases similar to the following:

- "indications of liquids dripping from the pump seal,"
- "observed by visual, audible, olfactory, or other indications of a leak to the atmosphere," and
- "sensory monitoring."

Essentially, equipment subject to visual inspections is exempt from instrument monitoring. Instrument monitoring is only used to confirm a potential leak. (See text box.)

General visual inspection procedure:

- (1) You observe visual or other indications of a potential leak (for example, liquid puddled under an in-line pump).
- (2) You must then do one of the following prior to the next required inspection:
 - Fix the pump so that liquid does not drip or puddle underneath it,
OR
 - Perform instrument monitoring.
- (3) If you performed instrument monitoring and discovered a leak, it must be repaired in the general sense under the procedures in § 65.105.
- (4) If instrument monitoring shows that there is not a leak, then no additional monitoring is required until the next regularly scheduled (monthly) instrument monitoring.

The new definition of repair, which includes follow-up instrument monitoring, is not always appropriate for this equipment. A re-organized structure in the CAR makes the procedure easier to follow and eliminates the problem with the definitions. It also avoids implying that indications of a leak determined by visual inspections are leaks. They are potential leaks, and typically the owner or operator must either fix the visual indications or perform instrument monitoring to confirm or deny an actual leak.

In addition, the CAR clarifies that documentation of weekly visual checks need only include a record that the check was conducted; the pump-by-pump documentation required by the referencing subparts is not necessary.

65.108

How is the connector standard different?

Because subparts V and VV do not require instrument monitoring for connectors, the CAR provisions for connectors apply only to HON sources. The CAR's approach to connector monitoring requires much less frequent monitoring for process units with good performance histories.

For connectors, as for valves, the monitoring periods have been extended. The HON contains provisions for extending the monitoring period to once every 4 years if the percentage of leaking connectors is less than 0.5 percent. The CAR extends the HON concept to an 8-year monitoring period for

process units with less than 0.25 percent leaking connectors. This approach for connectors applies on a process unit basis; subgrouping (as discussed for the alternative valve monitoring program) is not an option.

The extended 8-year monitoring period is warranted for connectors which can achieve and maintain a leak rate of less than 0.25 percent, as the lower threshold will forbid any poorly performing process units from qualifying. In addition, connectors are static pieces of equipment without moving parts. They are much

less likely to leak than dynamic pieces of equipment like pumps and valves.

As a safeguard, the CAR requires half of the connectors to be monitored within the first 4 years. The process unit must have less than 0.35 percent leaking connectors to remain in the 8-year program; failing the 0.35 percent "half-way check" means the remainder of the connectors in the 8-year program must be monitored in the next 6 months. After all the connectors have been monitored, the process unit can begin a new 8-year monitoring period cycle provided the process unit meets the 8-year leak rate limit. Otherwise, the process unit reverts to the monitoring period appropriate to the leak rate observed.

The 0.35 percent criterion was selected so that, if 0.35 percent (or more) of the first half of the connectors leak, the overall connector population will be

Connectors:

- The CAR provides for simplified, less frequent monitoring for HON sources.
- What's new?
 - Longest monitoring period extended
 - Simplified percent leaking connector calculation
- Subpart V and VV have no routine instrument monitoring requirements for connectors

Connector monitoring periods:

Leak Rate	Monitoring Period*
0.5 percent or greater	Annual
0.25 to 0.5 percent	Every 4 years
0.25 percent or less	Every 8 years

*See § 65.108(b)(3) for details and conditions.

monitored, and the overall results will be used to determine the monitoring frequency.

The CAR specifies that unsafe-to-monitor connectors are neither included in the initial screening nor in the leak detection provisions of the CAR.

65.109 - 65.114

How are the standards different for other equipment?

Some other clarifications and improvements are included in the CAR for the other equipment standards.

Agitators.

The CAR replaces the term "agitator" with "agitator seal" to more accurately convey the intent of the requirement. The agitator itself is not subject to leaking; rather, the agitator seal is subject to leaking.

Pressure relief devices.

The CAR clarifies that pressure relief devices designated as operating with an instrument reading less than 500 ppm are subject to a performance standard as opposed to a work practice standard with respect to instrument monitoring. If a pressure relief device is monitored 5 days after a pressure release and an instrument reading of 500 ppm or greater is detected, it is a violation of the standard.

Compressors.

The CAR clarifies that compressors designated as operating with an instrument reading less than 500 ppm are subject to a performance standard as opposed to a work practice standard with respect to instrument monitoring. Thus, if a compressor is monitored using Method 21 and an instrument reading of 500 ppm or greater is detected, it is a violation of the standard.

Sampling connection systems.

For sampling connection systems, the CAR contains flexible language from the HON allowing purged process fluid to be collected, stored, and transported to one of several systems or facilities. Two of the options for sampling connection systems are new options for subpart V and VV sources. However, one additional option from the HON [(transporting the purged process fluid to a National Pollutant Discharge Elimination System (NPDES) Group 1 wastewater stream or to an NPDES-permitted facility)] is allowed in the CAR for HON sources only. As explained in more detail in the preamble, sources subject to 40 CFR part 61, subpart V cannot be eligible for this option because the option requires an absence in the stream of the organic HAP listed on table 9 of 40 CFR part 63, subpart G; however, any source

subject to 40 CFR part 61, subpart V will contain benzene or vinyl chloride, two of the compounds listed in table 9. This option is not allowed for sources subject to 40 CFR part 60, subpart VV because purged materials for these sources may contain VOC species which are not HAP, and thus, were not evaluated along with the organic HAP species when this option was developed for the HON.

65.115

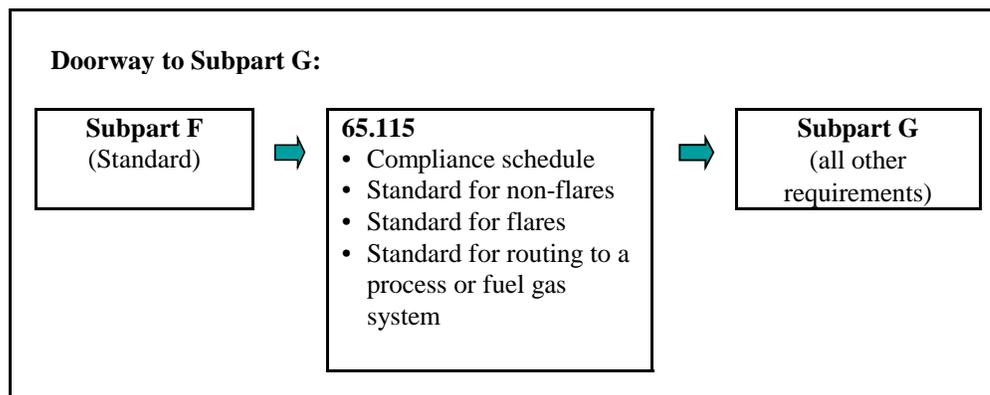
What are the requirements for using closed vent systems and control devices, fuel gas systems, and processes.

Several standards in the equipment leaks section give the owner or operator the option to control equipment leak emissions by one of the following methods:

- route to a process,
- route to a fuel gas system,
- equip with a closed-vent system that captures and transports leakage from the equipment to a control device.

Equipment controlled by these means are generally exempt from the normal equipment leak standards. Where the equipment leaks subpart allows the use of one of these means, it refers to § 65.115. This section provides equipment-leak specific requirements for control devices, routing to a process, or routing to a fuel gas system.

For example, § 65.107(e)(3) provides for pumps to be routed to a process, fuel gas system, or control device. A reference to § 65.115 is provided. In § 65.115, the compliance schedule, percent reduction standards, and standards for flares, routing to a process, and routing to a fuel gas system are listed. The reader is then referred to subpart G for the rest of the requirements.



The information in § 65.115 is specific to equipment leaks; the information in subpart G is generally applicable to all control devices, routes to processes, and routes to fuel gas systems.

65.116

What is the quality improvement program for pumps?

Pump quality improvement program.

The CAR incorporates the HON provisions that require a quality improvement (QIP) program for certain pumps in light liquid service. The QIP will be a new requirement for any equipment that is subject to subpart V or VV. A QIP is required if more than a stipulated number of pumps leak at a process unit or plant site. The QIP requires a facility to conduct a program to identify designs or operating practices that lead to poor performance, evaluate potentially superior technologies, undertake (if determined feasible) a pump or seal replacement program consistency with the findings, and institute a quality assurance program. The QIP program is identical to the HON except that it applies immediately to all pumps in light liquid service and does not have a phase-in period.

65.117

What are the alternative provisions

Batch processes.

The CAR incorporates the HON's alternative provisions for batch processes and modifies these provisions to allow additional flexibility regarding the required use of pressure measurement devices. The HON requires a device with a precision of 2.5 millimeters of mercury in the range of the test pressure and the capability to measure pressures as high as the relief set pressure of the pressure relief device. Under the CAR, when such a device is not reasonably available, owners and operators may use an alternative pressure measurement device if the duration of the test is extended as specified.

65.118

What is the alternative standard for enclosed and vented process units?

This section specifies that process units that are enclosed and vented to a control device are exempt from all leak detection and repair provisions, if the capture and control systems meets the requirements of §65.115.

65.119 & 65.120

What recordkeeping and reporting requirements are included for equipment leaks?

These two sections of the equipment leaks subpart, §§ 65.119 and 65.120, contain a "check-list" of all the required records and reports associated with equipment leaks. This user-friendly, audience-driven approach is an enhancement to the referencing subparts.

The recordkeeping section is structured in the same way as the overall subpart; with identification records listed first, followed by leak detection and repair records, followed by equipment specific records, and concluding with records associated with the pump QIP, batch process alternative, and enclosed/vented process alternative. The recordkeeping section also points to the report in which each record must be included.

Recordkeeping and Reporting:

- The CAR summarizes and consolidates every required record and report in two sections.
- What's new?
 - User friendly summary
 - Audience-driven format
 - "Check-list" of required records and reports

The reporting section is structured around the various reports that must be submitted. Each report is given its own paragraph, with the subparagraphs clearly indicating all of the required elements (associated with equipment leaks) for each report.

2.6 Summary of the CAR - Closed-vent Systems, Control Devices, and Routing to a Fuel Gas System or a Process

What does subpart G of the CAR address?

Subpart G of the CAR addresses closed-vent systems and control devices, and also the related control options of routing vent streams to fuel gas systems or process equipment. In the referencing subparts, each individual subpart provides details on equipment requirements, monitoring procedures, and recordkeeping and reporting for control devices. While often similar, having to consider all of the separate requirements was quite complex, especially for cases where emissions from several emission points are routed to a common control device. Subpart G consolidates requirements from *all* of the storage vessel, process vent, transfer rack, and equipment leak referencing subparts and *all* applicable provisions from the three sets of general provisions.

Structure of Subpart G:

Section	Content
65.140	Applicability
65.141	Definitions
65.142	Standards (roadmap to subpart G)
65.143	Closed-vent systems requirements
65.144	Routing to fuel gas systems and processes
65.145 - 65.155	Control and recovery devices requirements
65.156	General monitoring requirements
65.157 - 65.158	Performance test and flare compliance determination requirements and procedures
65.159 - 65.163	Data handling and recordkeeping
65.164 - 65.166	Notifications and reports

As with the other subparts of the CAR, subpart G is based primarily on language taken from the HON, with additional language from the other referencing subparts used as supplementary text. This section of the enabling document outlines how subpart G of the CAR is structured, discusses how the subpart works, and addresses the major differences between the subpart and the referencing subparts.

65.140
When does subpart G apply?

In keeping with the overall structure of the CAR, no sources are directly subject to subpart G of the CAR (with one exception, see the subpart DDD sidebar). Instead, if you are required (or choose) under subpart C, D, E, or F to comply by using a closed-vent system and control device, then you will be referred to subpart G for additional requirements pertaining to the closed-vent system and control device. Note that the same logic applies to routing emissions to fuel gas systems or process equipment.

65.141

What definitions are new or improved?

Although all of the definitions in the CAR are contained in the CAR general provisions (see § 65.2), several definitions relevant to closed-vent systems and control devices were modified during the consolidation process for clarity and conformity.

Boiler, incinerator, and process heater.

The definitions for these three devices were updated to the HON language to reflect current interpretations. For "boiler," this consisted of specifying that any device meeting the requirements for incinerator or process heater is not considered a boiler, but that an industrial furnace is considered a boiler. For "incinerator," this consisted of using a definition that, while more prescriptive than some of the referencing subparts (subparts III and NNN), allows for some degree of energy recovery (which was not an

40 CFR Part 60, Subpart DDD, and the CAR:

Subpart D of the CAR does not consolidate the process vent provisions of 40 CFR part 60, subpart DDD with those of 40 CFR part 60, subparts III, NNN, RRR and the HON because these subparts differ in terms of the applicability criteria for control. Subpart DDD of 40 CFR part 60 differs from the other NSPS and the HON in that it does not use TRE index value, flow, or concentration to determine if control is required for the vent.

Also, subpart DDD does not have provisions included in the NSPS and the HON requiring monitoring for vents that are not required to be controlled. The control requirements (as well as the requirements to monitor the controls) for subpart DDD process vents, however, are essentially identical to those in 40 CFR part 60, subparts III, NNN, RRR, and the HON and were able to be consolidated in subpart G of the CAR.

Because of the difference in how subpart DDD is consolidated in the CAR, sources subject to subpart DDD that comply with the CAR are referenced directly to subpart G. Subpart D of the CAR does not apply.

option for subpart BB incinerators). For "process heater," this consisted of adding the specification "enclosed combustion device" to be consistent with boilers and incinerators as well as adding a description of the process heaters' secondary function (heating water in unfired heat recovery sections) to distinguish them from boilers.

Closed-vent system.

The CAR definition of closed-vent system allows the system to be composed of ductwork (in addition to piping, connections, and flow inducing devices). Also, the CAR definition clarifies that the closed-vent system does not include the vapor recovery system that is part of any tank truck or railcar.

Control device (combustion device and recovery device).

Combustion, and recovery devices are similar, but they have different monitoring, recordkeeping, and reporting requirements because the devices are designed for different uses.

For process vents, a distinction is made for recovery devices that are used to recover materials that are used, reused, or sold. These devices are not considered control devices when used on a process vent. The CAR makes this distinction clear by referring to these devices as recovery devices. The CAR refers to those devices that recover material that is not used, reused, or sold as "absorbers used as control devices" or "condensers used as control devices", etc. This terminology is different than the HON. The HON uses the term recapture device to refer to those recovery devices used as a control device (i.e., recovers material that is not used, reused, or sold).

What is considered a control device?

For non-process vents, control devices include:

- combustion devices (for example, boilers or incinerators)
- recovery devices (for example, absorbers or condensers)

For process vents, control devices include:

- combustion devices (for example, boilers or incinerators)
- devices that do not recover material for use, reuse, or sale (for example, absorbers or condensers)

Whether these devices are considered control devices or not depends on the type of emission point. A recovery device cannot be used as a control device for a process vent [with one exception, see § 65.63(a)(2)(ii)]. This is because by definition, the process vent does not exist until after any recovery devices; recovery devices prior to the process vent exhausting to the atmosphere are considered to be part of the process and not part of the control device.

Flow indicator.

The CAR uses the HON definition, slightly reworded for clarity. The change from the other referencing subparts is that the flow indicator is not necessarily required to detect whether gas flow is present in a line.

Flexibility is added, as the flow indicator can alternatively detect whether the valve position would allow gas flow to be present in the line.

Malfunction.

In relation to closed-vent systems and control devices, the definition of malfunction was clarified by adding "monitoring equipment" to the definition (in addition to air pollution control equipment and process equipment).

Previously, if the monitor had a malfunction and was providing erroneous readings, the readings could still be considered valid. A malfunction would not be recognized because the control and process equipment were still functioning normally.

65.142

What is the "standards" section?

The standards section, § 65.142 of subpart G of the CAR, acts as a roadmap to subpart G. Because subpart G contains requirements for controlling all types of emission points (storage vessels, process vents, transfer racks, and equipment leaks), many of the requirements pertain only to a certain type or types of emission points. In general, there are four tracks through the closed-vent system and control devices subpart:

Control Device Tracks:

Track 1: Storage vessels and low-throughput transfer racks

- Closed-vent systems (§ 65.143),
- Fuel gas systems and processes (§ 65.144),
- Flares (§ 65.147), or
- Non-flare control devices (§ 65.145)

Track 2: Group 1 process vents and high-throughput transfer racks

- Closed-vent systems (§ 65.143),
- Fuel gas systems and processes (§ 65.144), (*transfer racks only*)
- Flares (§ 65.147), or
- Non-flare control devices (§§ 65.148 through 65.155)
- (*control device specific requirements*)

Track 3: Group 2A process vents

- Closed-vent systems (§ 65.143),
- Final recovery device monitoring (§ 65.153)

Track 4: Equipment leaks

- Closed-vent systems (§ 65.143),
- Fuel gas systems and processes (§ 65.144),
- Flares (§ 65.147), or
- Non-flare control devices (§ 65.146)

Note that the specified sections refer the reader on to the applicable monitoring, recordkeeping, and reporting requirements contained in §§ 65.156 and 65.159 through 65.166.

- Track 1: Storage vessels and low-throughput transfer racks,
- Track 2: Group 1 process vents and high-throughput transfer racks,
- Track 3: Group 2A process vents, and
- Track 4: Equipment leaks.

All of the CAR subparts reference a specific paragraph of § 65.142, and that specific paragraph outlines the appropriate track for the given emission point. For example, if you choose to outfit a storage vessel with a control device (as provided for in subpart C), then you will be referenced by subpart C to § 65.142(a), which in turn references you to all of the provisions of subpart G that are applicable.

65.143

What are the requirements for closed-vent systems?

The closed-vent system is the ductwork, piping, connections, and flow inducing devices that route emissions from the emission point to the control device. The CAR provides provisions for closed-vent systems, according to the following structure:

- equipment and operating requirements,
- requirements to install bypass monitors
- inspection requirements,
- inspection procedures, and
- leak repair provisions.

These provisions are designed to minimize leaks and ensure that the vent streams are indeed routed to the control devices; the structure of the provisions matches the other sections of the CAR for consistency.

Equipment and operating requirements.

The CAR clarifies that closed-vent systems must be operating at all times when emissions are vented to them. Although this requirement is explicitly stated in 40 CFR part 60, subparts VV and DDD, and 40 CFR part 61, subpart V, it is only implied in the other referencing subparts that it is necessary to have the closed-vent system in operation when emissions are vented to it. The requirement derives from the general provisions requirements in each part to ". . .operate and maintain any affected facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practices. . ." Also, a similar requirement for control devices is stated in many rules. Explicitly stating the requirement improves all the rules by making the compliance requirements clear.

Bypass monitors.

For piping in a closed-vent system that can divert the stream away from the control device and to the atmosphere (a bypass line), the owner or operator is required to either (1) install, maintain, and operate a flow indicator that takes a reading at least every 15 minutes, or (2) to secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration.

As the HON does, the CAR exempts from the bypass monitoring the following types of equipment: pressure relief valves needed for safety purposes, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines. The EPA has incorporated this exemption into the CAR as a clarification for the non-HON referencing subparts.

The closed-vent system provisions of subparts DDD and BB require the owner or operator to follow the car-seal or lock-and-key approach. The CAR's option to install flow indicators adds flexibility for these sources.

Bypass Monitoring and Subparts III and NNN:

Instead of bypass monitoring for lines that can divert the vapors in a closed-vent system away from the control device to the atmosphere, 40 CFR part 60, subparts III and NNN contain process vent flow monitoring provisions prior to the control device. The CAR does not allow this method of monitoring for bypasses. The EPA decided that the methods used by the HON and many of the other referencing subparts are more relevant. Monitoring the vent flow does not ensure that bypasses are not taking place. Regulated sources currently using flow monitors under 40 CFR part 60, subparts III and NNN would have to switch to bypass monitoring in order to use the CAR.

Furthermore, this change will be a significant burden reduction for many sources. Many process vents not subject to the HON but subject to 40 CFR part 60, subparts III and NNN, are routed to control devices subject to the HON through common closed-vent systems which are subject to the HON. These vents can, under the CAR, perform only the bypass monitoring requirements of the HON instead of also having their vent flow measured under 40 CFR part 60, subparts III and NNN.

Inspection requirements.

In keeping with the desire to update the requirements of the referencing subparts, the language used in the closed-vent system inspection provisions of the CAR are based on the more recent work practice approach of the HON

and subpart VV for closed-vent system inspections. The requirement to "operate with no detectable emissions" as stated in subpart Kb and subpart Y, and the requirement of subpart Ka to "collect all VOC vapors and gases discharged from the storage vessel" are not included in the CAR. The EPA concluded that the HON work practice inspection language was more specific and easier for enforcement and compliance, while achieving the intent of the referencing subparts.

The CAR retains the distinction between hardpiping and ductwork made in the HON and in the subpart VV closed-vent system inspection provisions. Hardpiping and ductwork have different leak inspection requirements under the CAR. This distinction does not exist in subparts V, Y and BB. Essentially, ductwork must be inspected more often than hardpiping because ductwork is more likely to leak.

Also, HON provisions covering situations where it is unsafe- or difficult-to-inspect the closed-vent system were applied to the CAR.

The CAR does not, however, adopt a HON requirement to inspect storage vessel closed-vent systems during filling of the vessel. Pressure in a storage vessel closed-vent system, and therefore potential leaks of regulated material, is not a function of filling (because storage vessels are designed to relieve at low pressures). This requirement is not found in any of the other referencing subparts.

Inspection procedures.

Clarifying improvements were made to the consolidated closed-vent system inspection procedures.

For example, the HON requires that the calibration gas be no more than 2000 ppmv higher than the applicable leak definition. This requirement in the HON is given in a generic section, to apply to various leak definitions. Since the leak definition for closed-vent systems is always 500 ppmv, the CAR specifies a calibration gas concentration limit of 2500 ppmv for multiscale instruments for closed-vent systems.

In addition, the HON requires that an instrument response factor, if used, be based on the mathematical average response factor for the given process fluid. Since the process fluid composition can vary considerably, EPA reduced the burden of this provision in the CAR by specifying that the

response factor be based on a representative response factor, which could apply to a family of process fluids. This avoids numerous response factor calculations for process fluids that are only marginally different in composition.

Leak repair provisions.

The HON transfer operations has the typical provision that repairs must be made no later than 15 calendar days after the leak is detected, but it also contains an alternative that allows repairs to be made at the beginning of the next transfer loading operation. The CAR extends this concept to all emission points by requiring repair to occur no later than 15 calendar days after detecting the leak or at the beginning of the next introduction of vapors to the system. If the closed-vent system is shutdown, there is no need to repair the leak (until the next introduction of vapors to the system).

65.144

How do I route emissions to a fuel gas system or process?

Fuel gas systems consist of piping and control systems that gather gaseous streams and return them to combustion devices for use as fuel gas. Routing to a process occurs when piping and control systems gather gaseous streams and return them to the process. For both such systems, the CAR adopted the equipment and operating requirements as well as compliance determination procedures from the HON. These requirements are outlined in § 65.144.

While developing the HON, EPA determined that routing emissions to a fuel gas system or process provides sufficient control, in most cases in excess of 98 percent reduction. None of the non-HON referencing subparts explicitly allowed this option. (See 61 FR 43703, August 26, 1996, for further discussion of this issue.)

Note that the option of routing to a fuel gas system or to a process is not provided for process vents in the CAR, since, based on the CAR's definition of process vents, these vent streams are not considered to be process vents unless or until they are vented to the atmosphere. If a potential vent to the atmosphere is routed back to the process or routed to a fuel gas system, then (by definition) a process vent does not exist. (A potential vent that is routed to a control device is considered to be a process vent. See the above discussion of the definitions for additional details.)

65.145

What are the requirements for control devices on storage vessels and low-throughput transfer racks?

Using a non-flare control device for a storage vessel or low-throughput transfer rack is covered under § 65.145 of the CAR. The structure is similar to the other sections of subpart G with an equipment and operating requirements, a design evaluation or performance

test requirements, and a monitoring requirement paragraph. Although the language is based on the HON, it is important to note that this section represents a consolidation of HON storage vessel and HON low-throughput transfer rack provisions.

Low-throughput transfer racks:

Low-throughput transfer racks are those that transfer less than a total of 11.8 million liters (3.12 million gallons) per year of liquid containing regulated materials.

Design evaluation and performance test.

The CAR allows a choice of a design evaluation or performance test for both storage vessels and low-throughput transfer racks. Also, the CAR clarifies that when a performance test is conducted the facility can specify the parameters to be monitored and their appropriate ranges. Continuous monitoring is not required for either storage vessels or transfer racks unless this is specifically required in the monitoring plan which identifies the parameters to be monitored and the monitoring range.

The three performance test/design evaluation options are summarized below:

- (1) The owner or operator may choose to do a design evaluation to demonstrate compliance. The requirements for determining the monitoring parameters were taken from the HON--the owner or operator chooses the parameters, the ranges, and the monitoring frequency based on site-specific information, manufacturer's specifications, engineering judgment, or other significant information.
- (2) The owner or operator may vent to a shared control device that must comply with the performance testing requirements of the CAR. The requirements for this case are also taken from the HON. There are minimal records and reports for this case, because the facility is already keeping records and submitting reports for the other emission point that shares the control device. Allowing just the performance test instead of the design evaluation is reasonable because the performance test

provides the information necessary to assure the control device can perform at the level needed to meet the standard.

- (3) The owner or operator may choose to do a performance test instead of a design evaluation. This is the new option under the CAR; it is not contained in any of the referencing subparts except for the HON low-throughput transfer rack provisions. This option applies the provisions for determining parameter ranges as described in the option for storage vessels and low-throughput transfer racks conducting a design evaluation on a non-shared control device (option 1).

The storage vessel subparts Ka, Kb, and Y do not allow for a performance test instead of a design evaluation. In addition, the performance test option was unavailable for HON storage vessels and subpart BB transfer racks. The CAR provides a flexibility that was previously unavailable in these rules.

Note that the CAR design evaluation is modeled after the HON, and is therefore more explicit and contains additional details compared to the equivalent design evaluation requirements under subparts Ka, Kb, and Y. Subpart Ka contains no details on what should be included in the design evaluation, and subparts Kb and Y contain some different details on what should be included. One detail from subparts Kb and Y that is *not* included in the CAR is the requirement to include the manufacturer's design specifications for the control device. In many cases, the manufacturer's design specifications are not appropriate to the situation in which the control device is being used, so including them in the design evaluation is confusing and unnecessary.

Enclosed combustion devices in the design evaluation.

In the CAR, enclosed combustion devices with temperature and residence time greater than or equal to a minimum temperature of 760°C and a minimum residence time of 0.5 seconds need only indicate in the design evaluation that this condition exists and no other documentation is required. These criteria are based on those found in the HON. Subparts Kb and Y have a similar provision, but they specify a minimum residence time of 0.75 seconds and a minimum temperature of 816°C. By using the HON values, the enclosed combustors meeting the minimums in subparts Kb and Y would also meet the minimums under the CAR.

Monitoring requirements.

2.6 Summary of the CAR

Closed-vent Systems, Control Devices and Routing to a Fuel Gas System or a Process

Subpart Ka of 40 CFR part 60 requires submission of a monitoring plan for control devices (including flares), but it contains no requirements to monitor per the plan or to report. The CAR storage vessel non-flare control device provisions are more prescriptive than the subpart Ka provisions, but EPA believes that there are very few subpart Ka storage vessels using closed-vent systems and control devices for compliance. In the spirit of consolidation, and noting that the CAR is a compliance alternative, the design evaluation and compliance determination provisions are based on the HON language.

65.146

What are the requirements for control devices on equipment leaks?

Using a non-flare control device for mitigating emissions from equipment leaks is covered under § 65.146 of the CAR. This section is also organized into equipment, operating, and monitoring requirements. This section clarifies that a performance test is not required for control devices used only to control emissions from equipment leaks.

The requirements in all three equipment leak referencing subparts (the HON, subpart V, and subpart VV) are very similar. The CAR presents a consolidated version of the requirements, with the following update. The requirement to operate the control devices at all times when emissions are vented to them is explicitly contained only in subpart VV, but the requirement can be inferred for the other subparts. The CAR explicitly requires control devices to be operating when emissions are routed to them.

65.147

What's new if I control emissions using a flare?

Controlling emissions through flares is a compliance option for many emission points under the CAR (and for many of the control device tracks through this subpart of the CAR). Equipment and operating provisions for flares are consolidated into this section of the CAR from many referencing

subparts, including the general provisions from 40 CFR parts 60 and 63. The flare section is organized into equipment and operating requirements, flare compliance determination procedures, and monitoring provisions.

Flare operating requirements.

The CAR contains provisions regarding the operation of flares that burn hydrogen as fuel or that could be modified to burn hydrogen as fuel. This language is consistent with contemporaneous amendments to 40 CFR parts 60 and 63 [§§60.18 and 63.11(b)].

Flare compliance determinations.

The HON language is used in the CAR for clarification on performing the Method 22 visible emission tests for flare compliance determinations at transfer operations with loading cycles of less than 2 hours. The observation under Method 22 is required to extend for 2 hours. Under the CAR, the observation can be conducted for the complete loading cycle for loading cycles less than 2 hours. Subpart BB does not have this provision for transfer racks.

The heating value formula for flares from 40 CFR part 60 general provisions is used in the CAR because this equation is believed to be the most prevalent in use. Using the part 60 general provisions equation consolidates and clarifies the equations, which were presented in the various referencing subparts with different terms, different formats, and on different bases (wet or dry). The various equations, however, all yield the same results if correctly applied, but the different representations caused confusion. The heating value equation for part 60 process vents, for example, is on a wet basis while the CAR and the part 60 general provisions equations are on a dry basis. Note that a "D" variable instead of a "C" variable for concentration is used in this equation to distinguish net heating value concentration from another concentration variable used in earlier equations in the CAR.

The CAR includes a requirement that is essentially the same as the provisions in subpart DDD requiring flare flame or pilot monitors to be operated during any flare compliance determination. This is a common sense provision that is not explicitly stated elsewhere, and it is included in the CAR for consistency and clarity.

Monitoring requirements.

The HON requirement for pilot flame monitoring could be read to call for monitoring of each pilot flame, which was not the intent of the HON. The wording in the CAR was clarified to require a device capable of "detecting that at least one pilot flame is present." To increase the flexibility of the referencing subparts, flare flame monitoring (as per subpart DDD) is allowed in the CAR. Therefore, any outage of the flame or pilot flame would be reportable under the CAR.

65.148 - 65.149

What's new if I control emissions using an enclosed combustion device?

The CAR provides equipment and operating requirements, performance test requirements, and monitoring requirements for three enclosed combustion devices: incinerators, boilers, and process heaters. These control devices are similar in that they reduce regulated material in the vent streams through combustion. In the CAR, §§ 65.148 (incinerators) and 65.149 (boilers and process heaters) provide the control device specific requirements; these sections also specify the recordkeeping and reporting requirements that are applicable.

The use of incinerators, boilers, and process heaters (as outlined in §§ 65.148 and 65.149) is essentially restricted to Track 2 (i.e., Group 1 process vents and high-throughput transfer racks, see discussion on page 67 of this document). Equipment being controlled on the other tracks are referred to other, general "non-flare control device" sections. The requirements for Track 2 control devices (see discussion on page 67 of this document) are more specific in nature, and are thus presented in individual sections.

The consolidated requirements presented in the CAR provide some clarification and burden relief to owners and operators using enclosed combustion devices. At the same time, the new requirements do not significantly impact the levels of environmental protection achieved by the referencing subparts.

Incinerator performance test exemptions.

The CAR exempts an owner or operator from the requirement to conduct a performance test if the incinerator burns hazardous waste and meets the requirements of RCRA. These incinerators are adequately tested under the RCRA program, and no further testing is required (see details at 61 FR 43708, August 26, 1996).

Boiler and process heater performance test and monitoring exemptions.

The CAR does not require performance testing and monitoring when the vent stream is mixed with the primary fuel of a boiler or process heater. The basis for this inclusion is contained in *Reactor Processes in the Synthetic Organic Chemical Manufacturing Industry -- Background Information for Promulgated Standards* (EPA-450/3-90-016b). This document explains that a vent stream introduced with the primary fuel would be expected to have an emissions reduction greater than 98 percent because temperatures are higher when the vent stream is passed through the flame front.

Similarly, large boilers and process heaters typically achieve an emission reduction greater than 98 percent. Therefore, the CAR follows the example of most of the referencing subparts by exempting boilers and process heaters from performance test and monitoring requirements if they are "large" (i.e., have a design heat input capacity of 44 megawatts or greater).

Also, the CAR exempts from the requirement to conduct a performance test any boiler or process heater that burns hazardous waste (if the device has been issued a final permit under 40 CFR part 270 or the device has certified compliance with the interim status requirements of 40 CFR part 266, subpart H). As discussed under incinerators, boilers and process heaters complying with the RCRA hazardous waste provisions have been adequately tested, and no further performance testing is warranted.

Boiler and process heater records of operation.

Many of the referencing subparts (40 CFR part 61, subpart BB and 40 CFR part 60, subparts DDD, III, and NNN) require records to be kept of the periods of boiler or process heater operation; this record is not included in the CAR. The record of boiler or process heater periods of operation is not necessary as it is a safety hazard to introduce gas into an idle combustion device. Therefore, vent streams are not expected to be vented to the boiler or process heater unless the device is operating, so a record of when the device is or is not operating is not needed.

65.150 - 65.153

What's new if I use an absorber, condenser, or carbon adsorber?

Subpart G of the CAR covers absorbers, condensers, and carbon adsorbers in four sections of the subpart. Section 65.150 covers absorbers as control devices, § 65.151 covers condensers as control devices, and § 65.152 covers carbon adsorbers as control devices, and § 65.153 covers all three devices when they are used as final recovery devices.

Control device versus recovery device.

The CAR provisions distinguish between equipment used as a control device and equipment used as a recovery device because they apply to different types of emission points. Track 2 (Group 1 process vents and high-throughput transfer racks, see discussion on page 67 of this document) emission points can be controlled by a *control device* (i.e., §§ 65.150 - 65.152 are applicable). The final recovery device section (§ 65.153) is specifically for devices that are used as *final recovery devices* on Track 3 emission points (i.e., Group 2A process vents, see discussion on page 67 of this document).

Recall from our discussion of the definitions (see this document's discussion of § 65.141) that for non-process vents, control devices include:

- combustion devices (for example, boilers or incinerators),
- recovery devices (for example, absorbers or condensers), and

while for process vents, control devices include:

- combustion devices (for example, boilers or incinerators), and
- device that do not recover material for use, reuse, or sale (for example, absorbers or condensers)

When absorbers, condensers, or carbon adsorbers are used as a control devices on Group 1 process vents or high-throughput transfer racks (to recover material for use, reuse, sale or not) these devices are considered control devices. The appropriate section (§§ 65.150, 65.151, or 65.152) applies.

Why is the distinction important? Because a "process vent" does not exist until after the final product recovery device. Without a distinction between devices that recover material for use, reuse, or sale and those that do not recover material for use, reuse, or sale, it would be impossible to determine which vents are subject to control.

New flexibility under the CAR.

Subpart BB of 40 CFR part 61 for benzene transfer operations does not contain provisions for condensers and absorbers. It does allow carbon adsorbers equipped with organic monitoring devices to be used. In the CAR, the absorber and condenser provisions are available for all referencing subparts, including subpart BB.

In addition, under 40 CFR part 61, subpart BB for benzene transfer operations, only organic monitors could be used for determining compliance with the standard when using a carbon adsorber. Under 40 CFR 60, subpart DDD, only organic monitors could be used for determining compliance with the standard when using an absorber, condenser, or carbon adsorber for control of a continuous process vent. In the CAR, either an organic monitoring device or a regenerative stream flow monitoring device is allowed for carbon adsorbers; an organic monitoring device or a condenser exit temperature monitoring device is allowed for condensers; and an organic monitoring device, or a scrubbing liquid temperature monitoring device and a specific gravity monitoring device is allowed for absorbers.

65.154

What do I have to do differently if I have a halogenated stream?

The halogenated vent stream requirements are applicable only to Track 2 emission points (Group 1 process vents and high-throughput transfer racks, see discussion on page 67 of this document). As such, subparts D and E of the CAR (process vents and transfer racks, respectively) present the procedures to use to determine if the vent stream is halogenated. The CAR requires that halogenated vent streams not be sent to a flare. It also requires that controlled halogenated vent streams are scrubbed (or otherwise have their halogen content reduced) either prior to or following the control device.

65.155

What are the general requirements for other control devices?

The requirements for halogen reduction devices are similar in format and scope to the other control device requirements, consisting of equipment and operating requirements, performance test requirements, and monitoring requirements. Therefore, halogen reduction device requirements have been consolidated into one section of subpart G (§ 65.154) rather than included with the individual control device sections.

The non-HON referencing subparts did not have specific halogen vent stream requirements. The CAR is therefore introducing some additional requirements for halogenated vent streams subject to only non-HON referencing subparts, if the owner or operator chooses to comply with the CAR.

In § 65.155, the CAR outlines the requirements for control devices other than those specified in §§ 65.147 through 65.154. These requirements essentially consist of the general control device requirements (those requirements that are common to most of the specific control device sections) that are applicable to Track 2 emission points (Group 1 process vents and high-throughput transfer racks, see discussion on page 67 of this document).

General control device requirements.

The CAR provides flexibility and clarity in its approach to equipment and operating requirements. First, it allows a 20 ppmv outlet concentration alternative to the 98 weight-percent emission reduction requirement. This alternative makes compliance much easier for low concentration streams, as it is very difficult to remove 98 weight-percent of the regulated material from a stream with a low concentration initially. Second, the CAR explicitly requires that control devices be operated at all times when emissions *are* vented to them. (See text box.)

The CAR includes performance test requirements for each of the control devices. However, the CAR does not require any *new* performance tests to be conducted. If performance tests have been previously conducted and submitted under the referencing subpart, then no additional performance test is required.

The CAR control device monitoring provisions require establishment of a range for the monitored parameters (i.e., temperature) that indicates proper operation of the control device. This is different from the part 60 referencing subparts. Those subparts specified operating limits instead of allowing control device specific ranges to be established. The CAR's approach is much more flexible, but owners and operators currently operating under limits would have to determine appropriate ranges to use the CAR. To facilitate owners and operators in this situation, the CAR allows the ranges to be "based upon a prior performance test...or upon existing ranges or limits established under a referencing subpart." This lets an owner or operator of (for example) a

Control Devices Shall Be Operating...

The CAR explicitly requires that control devices shall be operated at all times when emissions are vented to them. This is not spelled-out in clear terms in all of the referencing subparts (such as the HON, which implies through a general control device requirement that the control device must be operating). Note that the part 60 requirements specify that control devices shall be operated at all times when emissions *may* be vented to them. This was clarified in the CAR to read "*are* vented to them" because the part 60 requirement could be interpreted to require continuous operation of the device even when not receiving emissions.

process vent subject to 40 CFR part 60, subpart NNN set the range for the process vent's control device to any of the following:

- Set the operating range to be the same as the subpart NNN operating limits,
- Set the operating range based on prior performance tests conducted under subpart NNN,
- Set the operating range based on a new performance test conducted for that purpose under the CAR, or
- If a performance test is not required, set the operating ranges based solely on engineering judgement.

In addition, the CAR includes a clarifying provision from the NSPS process vent rules. This provision specifies what should be done if an owner or operator decides to replace an existing control device with another control device. The HON does not specify what should be done in this case, and the NSPS language specifies that the notice be made 90 days before the change. Additional flexibility was built into the CAR; the CAR only requires that the notification be made prior to the change. This notification can be included in an amendment to a title V permit. Alternatively, if title V is not applicable or if your title V permit is flexible enough to cover using more than one control device for an emission point (for example, alternative operating scenarios), then the notification can be included in a separate notice that can be part of a periodic report. Some additional requirements may apply depending on what type of device is replacing the existing device; be sure to read the applicable section when considering a change (§§ 65.147 to 65.155).

Clarity for an "other" control device.

The CAR differs from 40 CFR part 60, subparts DDD, III, NNN, and RRR in that more detail is given in the CAR on the information that must be provided to the Administrator in order to obtain approval for other devices. Under the NSPS, the Administrator specifies the appropriate monitoring procedures for the device. Under the CAR, a plan is submitted that includes the proposed monitoring, reporting, and recordkeeping procedures. By providing more details on the information to be submitted and by allowing the facility to propose monitoring, the CAR clarifies the information needed and aids in communication during the process of reviewing these plans.

Subpart DDD of 40 CFR part 60 and subpart BB of 40 CFR part 61 also contain a general duty requirement that specifies that the facility must

"provide the Administrator with information describing the operation of the control device. . .that would indicate proper operation and maintenance. . ." for non-listed control devices. The CAR features more specific monitoring requirements for non-listed control devices modeled after the part 63 general provisions and the HON.

65.156

What are the general monitoring requirements?

The closed-vent systems provisions (§ 65.143), routing to a fuel gas system or process provisions (§ 65.144), and the control device provisions (§ 65.145 through 65.155) all specify what types of monitoring must be performed. In some cases, the details are quite explicit; in others, the exact monitoring plan is left up to the owner or operator. In nearly all cases where monitoring is required by the CAR, however, the general monitoring requirements of § 65.156 apply. (There are some exceptions, see § 65.156(a) for details.)

The general monitoring provisions set forth procedures for the conduct of monitoring, for the operation and maintenance of continuous parameter monitoring systems (CPMS), for compliance determination, and for alternative monitoring parameter requests.

Conduct of monitoring.

The CAR specifies which monitoring data must be kept and used for compliance when a primary CPMS is being used along with a backup CPMS. Parts 60 and 61 do not explicitly state procedures for this situation.

CPMS operation and maintenance.

The CAR provides "good air pollution control practice" standards in this section, including how compliance will be determined and what to do in the case of a startup, shutdown or malfunction. The CAR adopts the requirements from the part 61 and part 63 general provisions for the immediate repair or replacement of CPMS parts to correct routine malfunctions.

Compliance and excursions.

As discussed above under § 65.155 (general control device requirements), the CAR requires a site to justify and set site-specific operating parameter ranges for control and recovery devices. The site can set the operating parameter ranges to be the same as existing NSPS operating limits or previously established ranges under the HON.

The control or recovery device operating parameters are monitored and if the monitoring results, on a daily average basis, fall outside the parameter range, then there is an excursion and it must be reported. (There are other situations, such as having insufficient data, which result in excursions.) The CAR allows one excused excursion during each (6 month) reporting period before the excursion is considered a violation.

Some additional situations are excursions, but they are not considered violations and they do not count towards the one excused excursion during each reporting period. These include excursions occurring during startup, shutdown, and malfunction periods and excursions occurring during periods of non-operation of the regulated source.

Alternative monitoring.

The CAR provides for monitoring parameters other than those specified for the listed control, recovery, and halogen reduction devices. The allowance is explicitly declared in § 65.156 and the procedures are spelled out at § 65.162(e). Note that as specified in § 65.155(c), if you are using a non-listed ("other") control device, then you must come up with your own, unique monitoring procedures.

The CAR also specifically allows non-automated CPMS in certain situations [see § 65.162(d) for details]. Although non-automated CPMS are allowed, the provisions require data to be collected no less frequently than hourly. Therefore, there may be substantial cost involved with a non-automated CPMS at a facility where the process is run nearly continuously. A small batch operation is an example of a facility where the cost of a non-automated system may be feasible.

65.157 and 65.158

What are the performance test and flare compliance determination provisions?

The control and recovery device sections (§§ 65.145 - 65.155) may require a performance test or flare compliance determination. They may also allow the option to conduct a performance test or flare compliance determination (for example, to establish new operating ranges for a process vent referenced from subpart NNN). In either case, the owner or operator will be referenced to § 65.157 for general procedures and to § 65.158 for specific test methods.

The referencing subparts do not clearly indicate what activities must be conducted during a performance test for a flare. The CAR does not use the term "performance test" for flares; for the purposes of distinction and clarity, the CAR refers to "flare compliance determinations." Some performance test

provisions from the referencing subparts do not apply to flare compliance determinations. The CAR clarifies that several provisions that have always been required for "performance tests" are applicable to flare compliance determinations, too. These include provisions such as noting that the Administrator may require a flare compliance determination at any time and the provisions regarding flare compliance determination waivers.

Performance test/flare compliance determination procedures.

The procedures given in the CAR for performance tests and flare compliance determinations provide for the following:

- Consideration of previously conducted tests,
- Waivers,
- Schedule for completion, and
- Providing for facilities (for example, sampling ports and safe sampling platforms).

The CAR contains some features not found in the referencing subparts. For example, the CAR allows 180 days to complete required performance tests, and 60 days to submit the report after the performance test.

(Compare this to the HON requirement of 150 days to complete the performance tests, followed by 60 days to complete the reports.)

This adopted time frame from the part 63 general provisions provides the greatest amount of time to

conduct the performance test and prepare the report; this more expansive time frame is appropriate for the CAR, given the potentially large number of performance tests and reports that would need to be completed. The shorter length of time required by some of the referencing subparts would not be appropriate for the CAR because the CAR covers several emission point types, and the shorter time frame could make the organizing of the performance tests and the preparing of reports more difficult.

No Duplicate Testing:

If a valid performance test has been conducted under a referencing subpart, then it is not necessary to test again to demonstrate compliance with the CAR.

The CAR excludes a provision from both 40 CFR part 61, subpart BB and the HON that requires a closed-vent system routing emissions from a transfer rack to a control device to be inspected prior to a performance test being

conducted. The inspection is a leak detection inspection using Method 21, and it is redundant because closed-vent systems under the CAR are already required to be inspected.

Additionally, the CAR allows performance tests and flare compliance determinations to be waived through written request to the Administrator if the Administrator determines that (1) the source is being operated in continuous compliance, (2) the source is operating under a compliance extension under 40 CFR part 63, or (3) the source is operating under a compliance waiver under 40 CFR part 61.

Performance test methods.

The procedures given in the CAR for performance test methods (§ 65.158) on control, recovery, or halogen reduction devices provide for the following:

- General procedures,
 - Operating conditions during the tests,
 - Alternatives to the given methods, and
 - Performance test runs;
- Test methods,
 - Sampling sites,
 - Volumetric flow rate,
 - Concentration (ppmv limit), and
 - Percent reduction;
- Halogen test methods,
 - Sampling sites,
 - Concentration,
 - Percent reduction, and
 - Procedure for compliance demonstration.

General procedures: operating conditions. The CAR requires that performance tests be conducted during "maximum representative operating conditions for the process." It clarifies this requirement (found, with similar terminology, in all of the applicable referencing subparts) by specifying that, during the performance test, the control device must be operated at maximum or minimum representative operating conditions for monitored control device parameters, whichever results in lower emission reduction. The CAR also contains, however, some features not found in the referencing

subparts. None of the non-HON referencing subparts, nor any of the general provisions, contain the additional clarifying provisions that the control device may be operated under maximum or minimum representative operating conditions, whichever results in lower emission reduction. The CAR provisions represent the intent of all of the referencing subparts and add some additional clarity.

General procedures: alternative test methods. The CAR allows a request to be submitted at any time for the use of alternative test methods. Some referencing subparts specify a time frame within which such a request can be made, usually tied to the startup date. The CAR does not specify a time frame because an alternative test method may be requested for performance tests other than at startup. It is not necessary to have the test method approved 30 days after an effective date or by the notification of anticipated startup as long as it is approved in time to conduct the performance test on schedule.

The CAR explains the types of changes that constitute alternatives to test methods by providing definitions and examples for minor, intermediate, and major changes. As indicated in these definitions, only major and intermediate changes to test methods must undergo a Method 301 demonstration. In those limited situations where the Administrator determines that a Method 301 demonstration is representative of an entire source category, the Administrator may approve a major alternative for application to the entire source category, such that only the initial application of the change would undergo a Method 301 demonstration.

General procedures: performance test runs. The CAR specifies that each performance test will consist of three separate runs using the applicable method; each run must be at least an hour in duration; and compliance will be determined using the arithmetic mean of the results of the three runs. Some of the referencing subparts did not explicitly specify what was required.

For transfer racks, the CAR provides details on how a performance test must be conducted for control devices capable of continuous vapor processing and for intermittent vapor processing systems. Subpart BB of 40 CFR part 61 does not specify these details for transfer racks and requires performance tests to be conducted over a complete loading cycle. The explicit provisions of the CAR are useful for transfer racks because loading a tank truck or railcar can take much longer than an hour. For long loading cycles it makes sense to

base the test run on how the control device works instead of on the loading cycle.

Test methods: sampling site. The CAR clarifies the performance test requirements for a boiler or process heater with a design input capacity less than 44 MW that is used as a control device. The CAR requires the inlet sampling site to be located so that it measures the pollutant concentration in all vent streams and primary and secondary fuels. Therefore, the percent reduction is determined for all vent streams and primary or secondary fuels.

Test methods: concentration. For combustion devices that do not use supplemental combustion air, the CAR does not contain the provision in 40 CFR part 61, subpart DDD which specifies that the concentration shall not be corrected to 3 percent oxygen when calculating the percent reduction or outlet concentration. Rather, the CAR and all of the other referencing subparts require the concentration to be corrected to 3 percent oxygen for all combustion devices.

Test methods: percent reduction. The CAR requires Method 25A, but if a source wants to use the simpler Method 25B they can apply for its use as an alternative method. For sources subject to subpart BB of 40 CFR part 61 (benzene transfer racks), the CAR represents a change in compliance method, because subpart BB allows the use of Method 25B to determine pollutant concentration for calculating the percent reduction efficiency. Method 25B is a simpler version of Method 25A, but it is only applicable when a primary constituent in the vent stream can be assumed (such as benzene). The CAR applies to the SOCFI, an industry that varies significantly on vent stream composition. Therefore, the CAR requires the more flexible Method 25A. Method 25B can always be requested as an alternative method, on a case-by-case basis.

65.159

What records are required for flares?

Recordkeeping requirements for flares, both for flare compliance determinations and for flare monitoring, are specified in § 65.159. These flare records are consolidated from the referencing subparts. The CAR contains the same recordkeeping requirements as the part 60 and part 63 general provisions and the referencing subparts, but the requirements are consolidated into one location. The following records are required:

Conditions of the flare compliance determination. The records include the following. Conditions of the flare compliance determination is a broad

requirement to be able to document the operating conditions, flare conditions, etc. that were present during the flare compliance determination.

Records associated with the flare compliance determination. Flare design, visible emission readings, heat content determination, flow rate measurements, exit velocity determinations, and periods when all pilot flames or the flare flame are out.

Monitoring and compliance records. Times and durations of all periods during which all pilots are out or the flame is out.

65.160

What performance test records are required for control, recovery, and halogen reduction devices?

In § 65.160, the CAR presents requirements for records that must be kept when conducting a performance test, TRE index value determination, or halogen concentration determination. These records pertain to control, recovery, and halogen reduction devices, respectively. The subpart requires the following records:

- Conditions of the performance tests;
- Records associated with the performance tests,
 - Nonflare combustion device,
 - Other nonflare control device, and
 - Halogen reduction device;
- Monitoring records during TRE index value determination; and
- Halogen concentration records.

(Note that ongoing monitoring records for nonflare control and recovery devices are specified in § 65.162.)

Some new features are incorporated into the CAR. For example, the CAR includes the requirement for records to be kept of the location where a vent stream is introduced into a boiler or process heater, but does not include a corresponding requirement for incinerators. Some of the referencing subparts required this record for incinerators, but the record is not necessary under the CAR because incinerators are required to have performance tests and continuous monitoring.

2.6 Summary of the CAR

Closed-vent Systems, Control Devices and Routing to a Fuel Gas System or a Process

The CAR requires records of the percent reduction or pollutant concentration to be determined at the outlet of the combustion device, on a dry basis corrected to 3 percent oxygen. While 40 CFR part 61, subpart BB does not explicitly require that the percent reduction be recorded for boilers less than 44 MW design input capacity, it is generally understood that these records are required. The CAR therefore clarifies the intent of subpart BB.

65.161

Can I keep less raw monitoring data under the CAR?

The CAR makes great strides in reducing the volume of raw, 15-minute (continuous) data that must be kept by the owner or operator. In the CAR, there are 3 main options for retaining continuous monitoring data:

- Record each measured value,
- Record block average values for intervals up to 15-minute averages, or
- Retain hourly average data and the most recent three valid hours of continuous records.

Many computer systems currently in use in the SOCOMI industry archive hourly data and "over-write" the raw data every few hours. This set up is required because of the massive amount of storage that would be required to maintain records of data on a more frequent basis. Typical SOCOMI process computer systems handle thousands of data points, so that even hourly records involve tens of thousands of data records each day. The CAR alternative has been provided to allow use of these existing systems without requiring installation of new computer systems or parallel paper (strip chart) systems.

The most recent three valid hours of records are required so that an inspector would have the necessary data to determine whether averages were being correctly calculated. Three hours of data are sufficient for checking on potential programming error, and by requiring the most recent 3 hours, the CAR ensures a randomness to the data that the inspector will use.

65.162

What recordkeeping is required for control, recovery, or halogen reduction device monitoring?

The CAR specifies valid hours because an invalid hour of monitoring may not contain the necessary data for the average verification. By providing for adequate data to demonstrate that the hourly average is correctly calculated, no reduction in compliance assurance is anticipated and very large initial and ongoing costs for new recordkeeping systems are avoided for many SOCOMI facilities.

2.6 Summary of the CAR

Closed-vent Systems, Control Devices and Routing to a Fuel Gas System or a Process

In § 65.162, the CAR presents the companion requirements to the monitoring paragraphs in the control and recovery device sections (§§ 65.145 - 65.155). This section provides details and procedures for the following monitoring records:

- Monitoring system records (CPMS calibration, maintenance, etc.),
- Combustion control device monitoring records,
- Halogen reduction device monitoring records,
- Recovery device monitoring records,
- Noncombustion control device monitoring records,
- Alternatives to the CPMS and monitoring recordkeeping provisions, and
- Provisions to monitor a parameter different than those listed.

Some new features are incorporated into the CAR. For example, the CAR reduces the requirements for CPMS calibration records by requiring only those records that are necessary to determine the accuracy of the readings. The CAR requires retention of only the "as found" and "as left" readings whenever an adjustment is made that will effect the CPMS reading, and a "no adjustment" statement otherwise. Compared to referencing subpart language requiring retention of "all" calibration records, the CAR language significantly reduces the number of potential records that must be retained and adds clarity to what is needed.

Under the CAR, the option to use a data compression system for control and recovery device data handling is allowed. Owners or operators may request approval of an automated data compression recording system that does not record values at a set frequency, but records values that meet set criteria for variation from previously recorded values.

65.163

What other records does the CAR require?

In § 65.163 contains requirements for "Other Records." This is where you will find the following recordkeeping requirements:

- Closed-vent system records,
- Storage vessel and low-throughput transfer rack control device records,
- Startup, shutdown, and malfunction records,
- Equipment leak control device records, and
- General requirement to record periods when the monitored parameters are outside of the applicable range.

Several features are included in the CAR closed-vent system recordkeeping procedures. For example, under the CAR, closed-vent systems that contain bypass lines keep only hourly records of flow indicator operation and diversion detection. Some referencing subparts required continuous records from the flow indicators.

Several referencing subparts require a description to be maintained of the vent stream. The description must contain a schematic recording of all valves and vent pipes that could vent the stream to the atmosphere. The CAR does not include this burdensome requirement. These types of descriptions are difficult to keep up-to-date because of the frequency with which the routing systems change. Also, the facility can explain the system at an inspector's request with the aid of other drawings, equipment leak records, and visually. An inspector could also request this description to be provided at the time of the inspection.

The CAR incorporates the difficult-to-inspect equipment concept, allowing some equipment in a closed-vent system to be monitored infrequently. Some referencing subparts did not feature this burden reducing allowance.

For car seals, the CAR requires monthly visual inspection with records that indicate when a car-seal is broken. The 40 CFR part 60, subpart RRR requirement to record the serial numbers of car-seals and to maintain this record when car-seals are replaced is not in the CAR. Thus, the necessary record is whether a car-seal is broken and not exactly which car-seals are in place. Not having to record the serial numbers of all car-seals provides a burden reduction to subpart RRR sources.

When equipment leaks are detected in a closed-vent system, 40 CFR part 61, subpart V and 40 CFR part 60, subpart VV require records of information such as repair method, the signature of owner or operator, and expected date of successful repair. These requirements are not included in the CAR because the CAR requires other records that adequately document the necessary information for leaking equipment. The required records are: the instrument and the equipment identification number; the operator name, initials, or identification number; the date the leak was detected, the date of the first attempt at repair, the date of successful repair of the leak; maximum instrument reading measured after the leak is successfully repaired or determined to be non-repairable; the reason for a delay of repair, if there is a

2.6 Summary of the CAR

Closed-vent Systems, Control Devices and Routing to a Fuel Gas System or a Process

delay; and copies of the periodic reports if records are not maintained on a computerized database.

65.164 - 65.167

What are the reporting requirements?

The reporting requirements of the CAR are outlined in the text box below. The CAR provides additional flexibility regarding the notification to the Administrator that a performance test is being conducted by specifying what should be done if there is a delay in conducting the scheduled performance test. The CAR requires the owner or operator to provide at least 7 days notice prior to the rescheduled date of the performance test, or to arrange a rescheduled date by mutual agreement with the Administrator.

Reports Required Under Subpart G:

Performance test/flare compliance determination reports (§ 65.164)

- Contents of report,
- Notification of intent to conduct performance tests,
- Schedule for test/determination submittal, and
- Application for waivers.

Initial Compliance Status Reports (§ 65.165)

- Contents of report for storage vessel or transfer rack routed to a process or fuel gas system,
- Contents of report for storage vessel or low-throughput transfer rack to a nonflare control device,
- Operating ranges for monitored parameters on control, recovery, or halogen reduction devices,
- Halogen reduction device information, and
- Alternative recordkeeping.

Periodic Reports (§ 65.166)

- General report contents including: reporting period dates, operating times, periods when monitoring parameters are outside their established ranges, etc.),
- Contents of report for closed-vent systems, flares, nonflare control devices, etc., including: periods when a vent steam is diverted from the control device, a car-seal is broken, bypass valve line position is changed, pilot flame or flare flame is absent, planned routine maintenance on control devices controlling storage vessels, and daily average values of monitored parameters when they are outside of range, etc.

Other Reports (§ 65.167)

- Reports when replacing an existing control or recovery device.
- Startup, shutdown, and malfunction periodic reports.

3.0 Burden Reductions and New Requirements

3.0 Burden Reductions and New Requirements

What burden reductions and new requirements are contained in the CAR?

The CAR contains a number of significant benefits to all parties. The most significant burden reductions were discussed in section 2.0 of this document as the differences between the CAR and the referencing subparts were enumerated.

The CAR consists of a consolidated set of requirements. In many cases, the consolidated language provides a reduction in burden to industry. Some, although few, CAR provisions are more stringent than their corresponding requirements under the referencing subparts. And some CAR procedures, while introducing burden reducing alternatives, also introduce minor additional recordkeeping and reporting. One example is the allowance under the CAR storage vessel provisions for control device downtime during planned routine maintenance. The opportunity to plan for routine maintenance was not present in subparts Ka and Kb of 40 CFR part 60, therefore the CAR contains an updated, burden reducing procedure. To take advantage of this option, the CAR introduces additional recordkeeping. The net burden change is a decrease, but there is some extra recordkeeping.

In general, there are four types of differences between the CAR procedures and the corresponding referencing subpart procedures. They consist of the following:

- Unquantifiable burden decreases,
- Quantifiable burden decreases,
- Burden increases necessary to achieve an overall burden-decreasing program, and
- Burden increases for the sake of clarity, completeness, and consistency.

What are the unquantifiable benefits?

The CAR is a clearer, simpler, smaller, and consistent set of rules compared to the 16 different referencing subparts from 3 different regulatory programs (part 60, part 61, and part 63). Savings will become evident for industry and for the enforcement community because of the reduced complexity. But while the elimination of a specific record or element of a report is a quantifiable decrease in burden, it is difficult to estimate the savings that result directly from consolidation.

The unquantifiable benefits include the following:

3.0 Burden Reductions and New Requirements

Smaller rule.

The CAR is physically smaller than the sum of the referencing subparts. For sources to which multiple referencing subparts apply, the CAR will likely consist of fewer total words. This will save time both in initial compliance determination activities and during continuing compliance. References will be found quickly and more easily. Facilities and agencies will both save time in training new staff.

Also, the CAR is specific to SOCOMI sources. It does not contain provisions that are not applicable to the user reading the material. As an example, the referencing general provisions typically contain requirements for opacity and particulate matter. The CAR does not contain these requirements in its general provisions.

In addition, the CAR uses definitions in place of wordy descriptions. For example, the CAR replaces "the internal floating roof's primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the stored liquid surface from the atmosphere; or a slotted membrane has more than 10 percent open area" with the defined term "IFR type B failure." Since IFR type B failures are repeatedly referred to, this sort of improvement significantly shrinks the amount of language needed to get the point across.

Simpler rule.

Timing for reports has been standardized. There is one set of requirements instead of 16 individual rules. The CAR contains many headers to help the reader identify the subject matter. The CAR was constructed with sections aimed at different target audiences: designers, operators, inspectors, and repairers. All of these changes make the CAR simpler to read and understand.

A simpler rule facilitates compliance, as the sources can more easily understand exactly what is required. It also helps the enforcement community by making it easier to determine what is required of each facility.

Consistent rule.

3.0 Burden Reductions and New Requirements

The referencing subparts were developed over a period of 20 years. Over that period, regulations have evolved. New, more streamlined requirements have been introduced. Environmental protection is ensured through less burdensome monitoring, recordkeeping, and reporting. The CAR is a vehicle for extending some of the more "modern" concepts in regulations to sources subject to the older referencing subparts.

Also, a single consolidated rule is consistent. There are some minor discrepancies among the referencing subparts; this is to be expected because the referencing subparts were developed over time to meet different regulatory needs. This results in facilities subject to multiple rules with slightly different requirements (such as report timing or design requirements). But in the spirit of "one industry; one rule," the CAR presents a consistent rule that can apply to all of the regulated sources at the plant site.

What are the quantifiable benefits?

Some benefits are more apparent when reading the CAR. These quantifiable benefits typically involve direct changes to specific paragraphs or procedures of the referencing subparts. As an example, two of the potentially most significant burden reductions are the following:

- greatly reduced and simplified monitoring requirements for equipment leaks, and
- significant reduction in the amount of continuous parameter monitoring system (CPMS) data required to be kept.

All of the significant quantifiable benefits were discussed in section 2.0 of this document.

Correlation tables have been prepared for each of the referencing subparts. In these tables, each paragraph of each referencing subpart is linked to the corresponding paragraph (or paragraphs) in the CAR. The correlation tables contain brief descriptions of the requirements, an indication of which paragraph changes constitute burden reductions, and comment fields

How Much Can I Save?

- Estimated savings vary by
 - size of facility
 - complexity of facility
 - number of existing rules currently applicable
- Estimated savings range from
 - 500 to 3400 hours per year
 - 1700 hours per year at typical facilities

3.0 Burden Reductions and New Requirements

discussing the changes. The correlation tables are available for download from the following: http://www.epa.gov/ttn/atw/car/car_rdp.html

Appendix A to this document presents an assessment of the recordkeeping and reporting burden that the CAR can potentially save a facility. Burden reduction is a function of the size and complexity of a plant site and will therefore vary for individual plant sites. The analysis, however, estimates between 500 and 3400 hours per year per plant site could be saved through implementing the CAR. (See appendix A for details regarding the assumptions and analytical procedure followed.)

What are the new requirements?

The CAR introduces new requirements to some sources. These new requirements fall into two broad categories: those necessary for the completeness of new procedures in the CAR, and those included for clarity and consistency.

New procedures.

The CAR extends a great deal of flexibility to many sources subject to the referencing subparts, but often extends additional requirements necessary for the increased flexibility. One example is subpart BB of 40 CFR part 61. Under the CAR, owners or operators may choose to control subpart BB transfer racks through vapor balancing, routing emissions to the fuel gas system, or routing emissions to the process. None of these options were contained in subpart BB, so the CAR adds a great deal of flexibility. The control requirements, monitoring, recordkeeping, and reporting associated with (for example) vapor balancing are "new" requirements, but the increased burden of these requirements is necessary for the added flexibility and net burden reduction of the vapor balancing option.

For each referencing subpart, the correlation tables clearly present all of the new requirements contained in the CAR.

Burden increases.

In some instances, the CAR is based on language from a referencing subpart that is more stringent than another referencing subpart. One example is the storage vessel design requirements. Subpart Ka of 40 CFR part 60 contains fairly loose design requirements; the other storage vessel subparts present stricter design requirements. Subpart Ka allows a vapor-mounted seal while the other storage vessel referencing subparts do not. A vapor-mounted seal does not meet the level of control required by subpart Kb, subpart Y, or the

3.0 Burden Reductions and New Requirements

HON; to maintain the current levels of environmental protection, the CAR presents the more stringent design requirements. To comply with the CAR, a storage vessel subject to subpart Ka may need to be retrofitted with compliant roofs and seals.

The occasional burden increase is necessary to achieve a consolidated rule. In some cases, the cost of bringing equipment up to the level of performance required by the CAR may exceed the benefit gained by complying with the CAR. To evaluate all of the burden increases, examine the correlation tables. In the correlation tables, all of the new paragraphs of the CAR are identified for each referencing subpart.

4.0 Implementing the CAR

4.0 Implementing the CAR

Now that I am interested in the CAR, what is next?

The first step to implementing the CAR is to identify the emission units at your facility that are eligible for the CAR and those you would like to have comply with the CAR.

Talk to Your Regulators:

- Not required, but highly recommended
- Coordinate implementation schedule
- Establish your Title V or non-Title V review process
- Evaluate the regulator's flexibility
 - changing scheduled reports
 - changing monitoring parameters

Getting into the CAR:

- Identify your regulated sources
- Talk to regulators/permitting authority
- Develop detailed package with implementation schedule in coordination with your regulator/permitting authority
- Install necessary control systems (in steps, if desired)
- Submit initial compliance status report

The EPA highly recommends that the next step by each facility is a meeting with your regulator. The CAR does not require you to meet with your regulator, but doing so will enhance and ease your transition to the CAR. By working together, you can establish an implementation schedule that is satisfactory to both parties. This meeting would also provide the opportunity for the regulator to explain the review process that

will be used for the facility.

Detailed Review and Planning:

- Identify new or changed requirements for each emission unit
- Develop materials
 - Title V sources: permit modification package
 - Non-Title V sources: Initial Notification of Part 65 Applicability
- Develop implementation schedule
 - Include in above report

After this meeting, you would need to develop the detailed plan for complying with the CAR for each emission unit. A Title V source will have already developed comprehensive regulatory analyses as part of the Title V permit application process. This analysis can be the starting point for developing a list of requirements for each emission unit that will comply with the CAR. The final output of this step will be a revision application for a Title V source or an Initial Notification of Part 65 Applicability for a non-Title V source.

4.0 Implementing the CAR

The contents of the package sent to the regulator will vary, depending on the amount of information previously sent to the regulator (for example, during the Title V development stage or in reports submitted pursuant to the referencing subparts). This implementation schedule package may contain a statement of intent to use the CAR, the number and types of emission unit types that will be using the CAR, the referencing subpart they are subject to, any current controls, and the schedule for completion of the transition to the CAR. Other information may be necessary depending on the source and the requirements of the regulators. The following items, if applicable, can also supplement the implementation schedule package:

- Any new equipment that will be required (for example, halogen scrubbers),
- Any new performance tests what will be required,
- Any new monitoring devices or parameters, and
- Any new startup, shutdown, and malfunction plan requirements.

Additional information will be required in the Initial Compliance Status Report (ICSR), which is due after the facility has completed the transition to the CAR. The ICSR is the report that lays out the monitoring parameters and parameter values that will be used to demonstrate compliance with the CAR. This

Requirements During Implementation:

- Each regulated source must continue to comply with referencing subparts until you fully implement the CAR for a regulated source
- Continue to meet all reporting requirements until CAR reports are being submitted

A regulated source must always be in compliance with either the CAR or the applicable referencing subpart(s).

report would include any values that have been identified as the result of any (initial) performance tests required by a referencing subpart. A facility may also opt to conduct a performance test to change either the monitored parameter or the parameter value.

4.0 Implementing the CAR

Resources in this Chapter

- Implementation checklists
 - Established sources
(existing before the CAR and complying with the referencing subparts)
 - Newly constructed sources
(erected after the CAR is implemented)
- Questions and Answers on implementation issues

The EPA recognized that facilities might not be able to comply with the CAR for all regulated sources that opt into the CAR at the same time. Therefore, the CAR allows the facility to develop a staggered schedule for implementing the CAR provisions.

It is important to remember that nothing in the CAR allows a facility to operate outside the requirements of the referencing subparts until complete compliance with the CAR is obtained for that regulated source.

Table 1 includes some frequently asked questions related to CAR implementation. Also, attachments to this section include checklists for use by the facility in attaining compliance with the CAR.

4.0 Implementing the CAR

Table 1. Frequently Asked CAR Implementation Questions

TOPIC	QUESTION	RESPONSE
Definition	<p>Each referencing subpart has its own definition of the terms "new" and "existing" (based on the original proposal date of the individual rules).</p> <p>Is there any term that can be used in this discussion that refers to whether units are constructed before or after a facility opts to comply with the CAR?</p>	<p>Yes. For the purposes of this discussion, we will use two different terms:</p> <ul style="list-style-type: none"> • Established sources will be used to reference those sources constructed prior to the CAR and already in compliance with appropriate referencing subparts. • Newly constructed sources will be used to reference those processes that are constructed (or trigger reconstruction definitions) after the date that a facility opts to comply with the CAR.
Definition	<p>What is the difference between the terms "compliance date" and "implementation date"?</p>	<p>The term compliance date refers to the date that a source is required to be in compliance with a referencing subpart. For established sources, this date has typically already passed. For example, for sources that were required to comply with an NSPS, this date was the start up date for that source.</p> <p>The term implementation date is unique to the CAR. This is the date that a source becomes compliant with the CAR, in lieu of the referencing subpart. A single facility may have multiple implementation dates for the various sources within that facility.</p> <p>All referencing subparts remain in effect until the CAR implementation date for that specific source. [Remember, even after the implementation date, there are a few requirements, not incorporated into the CAR, that remain in effect]</p> <p>For established sources, the implementation date is either established as part of the Title V permitting process, or as part of the <u>Initial Notification of Part 65 Applicability</u> for non-Title-V sources.</p> <p>For newly constructed sources that will comply with the CAR, the implementation date must be no later than the compliance date for the referencing subpart.</p>

4.0 Implementing the CAR

Table 1. Frequently Asked CAR Implementation Questions

TOPIC	QUESTION	RESPONSE
Implementation	If I opt into the CAR with my established sources, but know I am about to have a "newly constructed source," can I go through the process once and get all sources included?	<p>Yes. If you are a facility with a Title V, you can use the Title V operating permit process to obtain approval for all newly constructed sources as well as for established sources.</p> <p>If your facility is non-Title-V, then the newly constructed sources can be listed as part of the overall compliance schedule that you develop as part of <u>your Initial Notification of Part 65 Applicability</u>.</p>
Implementation Schedule	What is the CAR implementation date for established sources complying with the CAR?	There is no set date for all sources. The CAR is an optional compliance measure and all applicable referencing subparts remain in effect until the CAR implementation date. Therefore, this date is established by the source, in conjunction with its regulating authority.
State Delegation	How long will it take for my state to get the authority to implement the CAR?	<p>It is important to the CAR's success that no unnecessary delays occur in providing states with the authority to assist facilities to implement the CAR. Therefore, the EPA is taking two steps to streamline the transition:</p> <ol style="list-style-type: none"> 1. EPA will recognize the CAR as a pre-approved alternative compliance approach to the individual referencing subparts. This step may allow some states to begin to use the CAR immediately after promulgation since some States have the ability to recognize approved authorities under their existing State regulations governing delegation. 2. EPA will waive the need for formal delegation of the CAR where the State is already delegated the authority to implement each of the underlying referencing NSPS or NESHAP.
Reporting	So, if I am a Title V facility, I do not have to submit an <u>Initial Notification of Part 65 Applicability</u> ?	Correct. The information that would be included in an <u>Initial Notification of Part 65 Applicability</u> would be submitted as part of the Title V application or modification.
Title V	Can I opt into the CAR and change some of my compliance requirements and wait to make changes to my Title V permit?	No. Since compliance demonstration requirements (such as monitoring, recordkeeping, and reporting) are likely to change as part of the CAR implementation, the Title V permit must be modified. If not, the facility could be cited as "operating outside the permit conditions."
Title V	What is the Title V review procedure for opting into the CAR.	There are currently three levels of review for Title V operating permits: (continued)

4.0 Implementing the CAR

Table 1. Frequently Asked CAR Implementation Questions

TOPIC	QUESTION	RESPONSE
Title V (continued)		<p>Administrative review is the quickest review process and is limited to specific cases. Since monitoring and other compliance measures are likely to be reduced as part of complying with the CAR, Administrative review is not likely to apply to revisions to incorporate the CAR.</p> <p>The remaining two processes are the "minor " and "significant" review processes. The specific review process that will apply to your facility is dependent on the types of changes you are making and the current format of your permit. A list of some typical changes and the potential review process for these types of changes is included in the preamble to the proposed CAR. Incorporation of the CAR can be done as a minor modification.</p>
Non Title V	If I do not have a Title V permit now, would I be required to obtain one if I decide to opt into the CAR?	No. If you are not currently required to have a Title V operating permit, complying with the CAR will not trigger any requirement to obtain one. The CAR is an optional compliance measure for sources already subject to one or more of the referencing subparts.
Deciding not to use the CAR	What do I need to do if I do not want to use the CAR?	Nothing. The CAR is an optional compliance program and action is only required if you want to comply with the CAR.
Opting out of the CAR	Can I sign up for the CAR now and change my mind later?	<p>Yes. But if you opt to change after modifying your permit, another round of permit modifications will be necessary.</p> <p>Also, a "transition date" back to the referencing subparts must be established with your regulator.</p>
State Requirements	Does the CAR do anything to help me comply with my State requirements, such as RACT?	<p>Yes. In developing the CAR, the EPA wanted to facilitate burden reduction for sources subject to state-specific SIP requirements. To that end, EPA is preapproving the CAR.</p> <p>EPA is pre-approving the CAR as meeting RACT as defined in applicable CTGs. Therefore, a SIP revision will not be required prior to the implementation of the CAR if the applicable SIP expressly allows for the approval of alternatives to existing RACT requirements. This is only true, however, when the SIP is based on a CTG-defined RACT. The source will still need State approval of the CAR for non-CTG sources prior to implementation.</p>

4.0 Implementing the CAR

Table 1. Frequently Asked CAR Implementation Questions

TOPIC	QUESTION	RESPONSE
State Requirements (Continued)		<p>Based on EPA's pre-approval of the CAR as meeting RACT, EPA is establishing a streamlined process for review and approval of any SIP submittals that incorporate the CAR requirements. This action will expedite the process of incorporating the CAR into the SIP for purposes of complying with RACT requirements. This will be particularly important in states where the SIP does not already allow for the use of approved alternatives.</p> <p>EPA is recognizing the Title V permitting process as a mechanism through which the streamlining of overlapping requirements stemming from the SIP, NSPS, and NESHAP programs can be accomplished.</p>

Implementation Checklist

ESTABLISHED Title V Sources

Action/Activity	Required?	Due Date	Check When Complete
1. Develop internal plan, identify sources subject to referencing subparts, changes desired to reports, etc. <i>(see Section 2 of this manual for more information)</i>	No	[No due date: CAR is optional]	
2. Have preliminary meeting with regulator to discuss plan, coordinate implementation schedule, and determine Title V review process.	No	[No due date: CAR is optional]	
3. Refine plan internally, meet again with regulator (as needed), make final decision to opt into the CAR.	No	[No due date: CAR is optional]	
4. Develop implementation schedule and other materials needed for revision to Title V permit/application.	Yes	[Date established with regulator; no specific date requirements since CAR is optional and sources are already in compliance with referencing subparts]	
5. Continue to comply with referencing subparts for each affected source that is not complying with the CAR.	Yes	[ongoing]	
6. Attain full compliance with all provisions of the CAR	Yes	[Implementation date established during Title V revision process]	
7. If not already submitted with Title V application, submit any monitoring parameters or parameter ranges to regulating authority. <i>[This is the <u>Initial Compliance Status Report</u>.]</i>	Yes	[As agreed to with regulator]	
8. Submit first <u>Periodic Report</u> documenting compliance with the CAR requirements. <i>[This report may need to be submitted for some regulated sources prior to your final implementation date if CAR compliance is phased in.]</i>	Yes	[Established with regulator: can be no later than 8 months after last submittal of a part 60, 61, or 63 periodic report]	
9. Submit second <u>Periodic Report</u> documenting compliance with the CAR.	Yes	Date: _____ (add underscore) [Established with regulator: due within 60 days of the end of the previous 6-month reporting cycle]	
10. Continue to submit Periodic Reports on a semiannual basis.	Yes	Report 1: _____ Report 2: _____ [Insert day and month]	

Implementation Checklist

NEWLY CONSTRUCTED Title V Sources

Action/Activity	Required?	Due Date	Check When Complete
1. Decide whether to comply with CAR or referencing subpart.	No	[No due date: CAR is optional]	
2. Develop implementation schedule and other materials needed for revision to Title V permit/application. <i>[Final implementation date cannot be later than the compliance date for the new source]</i>	Yes	[Date established with regulator for obtaining permit approvals]	
3. Attain full compliance with all provisions of the CAR	Yes	[CAR implementation date for a regulated source can be no later than the compliance date of the referencing subpart]	
4. Alert regulator of <u>Initial Performance Test</u> , if applicable.	Yes	[At least 30 days prior to testing]	
5. Conduct <u>Initial Performance Test</u> , if applicable.	Yes	[Within 180 days of compliance date]	
6. Develop compliance and monitoring requirements and submit <u>Initial Compliance Status Report</u> .	Yes	[Report must be postmarked within 240 days after applicable compliance date or 60 days after completion of the initial compliance test, whichever is sooner.]	
7. Submit first <u>Periodic Report</u> documenting compliance with the CAR requirements.	Yes	[Established with regulator: can be no later than 8 months after last submittal of a part 60, 61, or 63 periodic report]	
8. Submit second <u>Periodic Report</u> documenting compliance with the CAR.	Yes	[Established with regulator: due within 60 days of the end of the previous 6-month reporting cycle]	
9. Continue to submit Periodic Reports on a semiannual basis.	Yes	Report 1: _____ Report 2: _____ [Insert day and month]	

Implementation Checklist

ESTABLISHED Non-Title V Sources

Action/Activity	Required?	Due Date	Check When Complete
1. Develop internal plan, identify sources subject to referencing subparts , identify changes desired to reports, etc. <i>(see Section 2 of this manual for more information)</i>	No	[No due date: CAR is optional]	
2. Have preliminary meeting with regulator to discuss plan, coordinate implementation schedule, determine review process.	No	[No due date: CAR is optional]	
3. Refine plan internally, meet again with regulator (as needed), make final decision to opt into the CAR.	No	[No due date: CAR is optional]	
4. Develop the <u>Initial Notification of Part 65 Applicability</u> to include implementation date	Yes	[Date established with regulator; no specific date requirements since CAR is optional and sources are already in compliance with referencing subparts]	
5. Continue to comply with referencing subparts for each process that is not complying with the CAR.	Yes	[ongoing]	
6. Attain full compliance with all provisions of the CAR	Yes	[Implementation date established during Title V revision process]	
7. Submit any monitoring parameters or parameter ranges to regulating authority in the <u>Initial Compliance Status Report</u> .	Yes	[As agreed to with regulator]	
8. Submit first <u>Periodic Report</u> documenting compliance with the CAR requirements. <i>[This report may need to be submitted for some sources prior to your final implementation date if CAR compliance is phased in.]</i>	Yes	[Established with regulator: can be no later than 8 months after last submittal of a part 60, 61, or 63 periodic report]	
9. Submit second <u>Periodic Report</u> documenting compliance with the CAR.	Yes	Date: _____ [Established with regulator: due within 60 days of the end of the previous 6-month reporting cycle]	
10. Continue to submit Periodic Reports on a semiannual basis.	Yes	Report 1: _____ Report 2: _____ [Insert day and month]	

Implementation Checklist

NEWLY CONSTRUCTED Non-Title V Sources

Action/Activity	Required?	Due Date	Check When Complete
1. Decide whether to comply with CAR or referencing subpart.	No	[no due date. CAR is optional] [Compliance date for the CAR and the referencing subpart would be the same date. Therefore, all dates for CAR are based on dates for referencing subparts]	
2. Develop implementation schedule and other materials needed for revision to any operating permit. <i>[Final implementation date cannot be later than the compliance date for the new source]</i>	Yes	[Date established with regulator for obtaining necessary permit approval]	
3. Attain full compliance with all provisions of the CAR	Yes	[CAR implementation date for an individual source can be no later than the compliance date of the referencing subpart]	
4. Alert regulator of <u>Initial Performance Test</u> , if applicable.	Yes	[At least 30 days prior to testing]	
5. Conduct <u>Initial Performance Test</u> , if applicable.	Yes	[Within 180 days of compliance date]	
6. Develop compliance and monitoring requirements and submit <u>Initial Compliance Status Report</u> . [Note: The requirements for this report may largely be met with the revisions to the facility's Title V; however, any requirements that stem from performance tests, such as identifying parameters and parameter values to be measured to demonstrate compliance, must be submitted at this time.]	Yes	[Report must be postmarked within 240 days after applicable compliance date or 60 days after completion of the initial compliance test, whichever is sooner.]	
7. Submit first <u>Periodic Report</u> documenting compliance with the CAR requirements.	Yes	[Established with regulator: can be no later than 8 months after last submittal of a part 60, 61, or 63 periodic report]	
8. Submit second <u>Periodic Report</u> documenting compliance with the CAR.	Yes	[Established with regulator: due within 60 days of the end of the previous 6-month reporting cycle]	
9. Continue to submit Periodic Reports on a semiannual basis.	Yes	Report 1: _____ Report 2: _____ [Insert day and month]	

Appendix A: Burden Reduction Analysis

1.0 INTRODUCTION

This burden reduction analysis is for the Consolidated Federal Air Rule (CAR) for the Synthetic Organic Manufacturing Industry (SOCMI), see 65 FR 78267, December 14, 2000. The CAR is an optional compliance approach for plant sites that must comply with existing subparts in the Code of Federal Regulations (CFR). The CAR is a consolidation of major portions of 13 different New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) pertaining to storage vessels, process vents, transfer operations, and equipment leaks; it also consolidates the general provisions for the three applicable parts (40 CFR parts 60, 61, and 63). These subparts from 40 CFR parts 60, 61, and 63 are referred to as "referencing subparts" because they have been amended to refer to the CAR as a compliance alternative. This is an informal analysis developed only to show potential reductions that could occur at a typical SOCMI facility. This analysis does not replace or supersede the information collection request (ICR) submitted to the Office of Management and Budget (OMB) as part of this rulemaking, and cannot be directly compared. We are presenting this analysis here instead of presenting the OMB submittal because it is simpler. The OMB submittal is much more complex due to the mechanics of developing formal ICR's, and the formulas that must be adhered to when estimating impacts do not relate well to this type of regulation.

Compliance with the CAR is a voluntary alternative; sources may continue to comply with existing applicable rules or may choose to comply with the consolidated rule. The effect of this consolidation will be to improve understandability, reduce burden, clarify requirements, and improve implementation and compliance with environmental regulation.

The main goals of the CAR are to reduce the regulatory burden, to maintain environmental protection at least to the level of the current rules, and to improve compliance. By simplifying the language and eliminating duplicative requirements, the CAR reduces the level of compliance effort that is required of an owner or operator. As a major theme in the consolidation process, possible burden reduction was the basis for examining each provision of the referencing subparts for potential revision in the corresponding language of the CAR. Particular scrutiny was given to provisions dealing with monitoring, recordkeeping, and reporting. Simply reducing the number of applicable rules, in and of itself, is a source of additional burden reduction.

In addition, strategies and approaches to regulating specific types of emission points, such as storage tanks or equipment leaks, have evolved and improved over the 25 years of SOCMI rule development. The CAR focuses on provisions that reflect the most current and effective approaches to emission control as well as the clearest and most concise language.

With respect to maintaining environmental protection, implementation of the CAR will not result in greater emissions because, in general, the CAR consolidates on the most stringent applicable requirements. Greater emission reductions would be likely since all sources choosing to comply with the CAR would be raised to the same level of control. It is anticipated that because of the burden reduction afforded by the CAR, sources will choose to comply with the CAR despite potential increases in stringency over some provisions in some of the referencing subparts.

Promulgation of the CAR does not constitute additional requirements per se. Rather, the recordkeeping and reporting activities in the CAR would be carried out in place of existing requirements. Because the overall intent and effect of the CAR are to reduce the recordkeeping and reporting burden and because the CAR is an optional compliance alternative, there is effectively no additional burden incurred pursuant to the CAR. Therefore, the burden estimation presented in this analysis is an estimate of the overall decrease in burden that may be realized by owners and operators choosing to comply with the CAR. In fact, the savings on the burden and cost of the collection of information is expected to be better than quantified because the source owner or operator can pick and choose exactly what equipment to opt in and thereby maximize their burden reduction.

This burden calculation estimates the difference in hours required to comply with the CAR as opposed to the referencing subparts. In order to make such a comparison, each recordkeeping and reporting provision in the CAR was assessed for burden reduction or increase. The preamble to the proposed rule (63 FR 57748, October 28, 1998) discusses each subpart of the CAR (e.g., storage vessels or process vents); within these discussions, the preamble contains details of this provision-by-provision comparison. The reader should refer to the preamble for details concerning the rationale for the differences between the referencing subparts and the CAR; this document focuses on the rationale behind assigning percent burden reductions to those differences.

2.0 ESTIMATING THE BURDEN AND COST OF THE COLLECTION

2.1 Assumptions

Because the CAR is an optional compliance approach to a number of existing regulations, this section documents a calculation of the change in the burden for sources choosing to comply with the CAR instead of the referencing subparts. Several overall assumptions guided the analysis to estimate the change in burden.

First, a steady-state condition was assumed. Burden comparisons between the existing referencing subparts and the corresponding provisions in the CAR were made assuming the source has already implemented and is in compliance with the CAR. All reporting and other requirements (e.g., applicability determination) that make up the "up-front" (i.e., prior to implementing the referencing subparts) compliance activities are retained in the referencing subparts. These activities, as well as performance testing and initial compliance reporting, were assumed to have already been

performed. This assumption does not reflect the full scope of advantages of the CAR's improvements and clarifications made to performance testing, initial compliance reporting, and other activities required upon initial start-up. Any costs or cost savings associated with equipment modifications, performance testing, or initial compliance determinations were not considered because these costs will vary for existing versus new sources. In addition, while the CAR does contain some significant savings in relation to performance testing and other initial compliance activities, the CAR may be introducing some equipment design or other requirements for some sources that would have to be addressed prior to implementation.

Second, this analysis does not present the rationale for nor the full implications of all of the differences between the referencing subparts and the CAR. However, each percent burden reduction estimate used to calculate the overall change in burden associated with the CAR is explained. Additional information regarding the changes are discussed in the preamble to the proposed CAR.

Third, the analysis assumed that, for equipment leak programs, no pump Quality Improvement Program (QIP) is in place and that no batch or enclosed-vented process units are present. These programs are essentially identical to those contained in the Hazardous Organic National Emission Standards for Hazardous Air Pollutants (HON), 40 CFR part 63, subparts F, G, and H. Excluding these programs from this analysis is a simplifying assumption. Had they been included, the estimated burden reduction would have been greater.

Finally, the sample CAR units used in the analysis are assumed not to contain halogenated vent streams. Under the CAR, a halogen scrubber or other halogen reduction device would be required to be installed on halogenated vent streams originating from non-HON NSPS process vents and non-HON transfer racks subject to 40 CFR part 61, subpart BB. As noted in the proposal preamble, there are very few estimated sources with non-HON, halogenated process streams subject to 40 CFR part 60, subparts III, NNN, and RRR or to 40 CFR part 61, subpart BB.

2.2 Methodology

2.2.1 Outline of Methodology

As previously discussed, this burden assessment focused on the difference between the burden for a source operating under the existing referencing subparts and the same source operating under the CAR. To estimate this burden reduction, several steps were taken (all of which are discussed in more detail in the sections to follow).

The initial step consisted of defining a model CAR unit, including type of equipment present and applicable referencing subparts. This method assumed that a source will opt to use the CAR for a complete process unit including associated transfer racks and storage vessels. Because sources can

pick and choose the equipment to opt into the CAR, the method also assumes that they will select the equipment that will maximize their burden reduction.

For each referencing subpart, the original SF-83 burden estimation was consulted and the number of hours per "burden item" were obtained for the model CAR unit to establish a baseline. Note that only those burden items affected by the CAR were cataloged because the analysis focused on calculating a burden decrease from the baseline, not an absolute burden.

The next step consisted of identifying the actual differences in recordkeeping and reporting requirements for the model CAR unit under the applicable referencing subparts and under the CAR. Each referencing subpart SF-83 contains an estimate of the hours per year per respondent for assorted burden items; the next phase consisted of assigning each difference to the appropriate SF-83 burden item. Then, based on the differences in requirements for each burden item, a percent burden reduction was estimated. Summing the hours saved per burden item resulted in a total hours saved for the model CAR unit.

A national burden reduction was then estimated by taking the following steps. First, three model plant sites were developed with varying numbers of model CAR units. Model plant sites with multiple model CAR units accrued an additional burden reduction because the CAR achieves a unified control program for the entire plant site. Next, a total number of SOCFI plant sites was estimated based on assumptions in the HON SF-83.

Because the CAR is an optional compliance alternative, the national burden reduction will be a function of the number of plant sites choosing to comply with the CAR. The next step consisted of assuming different percentages of the total number of plant sites opting to use the CAR; the national burden reduction was therefore, the sum of the burden reduction for each plant site opting to use the CAR.

2.2.2 Model CAR Unit Development

The burden reduction was estimated based on a model CAR unit. As a simplifying assumption, a model CAR unit was selected that contained the same number and type of equipment documented in the SF-83 supporting statement for the HON as well as 40 CFR part 60, subparts Kb (storage vessels), NNN (distillation units), and VV (equipment leaks). As these rules are representative of all the referencing subparts, highlighting the burden reduction associated with these rules provides a reasonable estimate of the CAR's overall burden reduction.

In the HON SF-83, burden was estimated based on a "model facility" that consisted of the following equipment relevant to the CAR: control devices throughout the source with 20 parameters to monitor, 10 storage tanks, 4 transfer racks, 1 overall leak detection and repair program, and 1 source wide inventory of emission points. The HON SF-83 does not specify, however, if the collection of

equipment listed for the "model facility" is assumed to occur in a single CMPU or not. In addition, the number of "respondents" in the non-HON SF-83's did not always correlate well to the number of "sources."

As a solution, the number and type of equipment contained within the model CAR unit was selected to be a reasonable representation. Because of difficulty with using the numbers and types of equipment assumed in the original SF-83's, the following assumptions were made. The model CAR unit contains all of the equipment listed for the HON model CMPU. It also contains additional equipment equivalent to the same number of equipment per respondent assumed for each of the non-HON SF-83's. In other words, the model CAR unit contains the HON SF-83 items plus additional non-HON storage tanks subject to 40 CFR part 60, subpart Kb; non-HON distillation units subject to 40 CFR part 60, subpart NNN; and non-HON equipment subject to the equipment leak provisions in 40 CFR part 60, subpart VV.

This model CAR unit is believed to be representative of chemical manufacturing processes that exist. Note that later in this analysis under the model plant site discussion, the model plant sites are assumed to consist of one or more model CAR units. The number and type of equipment was assumed constant at the model plant site, but the number of model CAR units at the model plant site varied. Varying the number of model CAR units was an attempt to model the varying degrees of complexity inherent in the SOCFI.

2.2.3 Original Burden Items

The original SF-83's provide estimates of the hours per year per respondent for each burden item required by the rule. Because the nature of the SF-83's have evolved over the past 25 years, the burden items among rules are not identical nor even directly comparable. But the number of hours per year per respondent under the referencing subparts is comparable to the number of hours per year per respondent under the CAR because the burden items were made consistent between the referencing subpart and the CAR. Thus, the number of hours saved for each referencing subpart burden item were added to determine the total burden change for the model CAR unit.

2.2.4 Differences in Recordkeeping and Reporting Burden Under the Referencing Subparts and Under the CAR

The preamble to the proposed CAR discusses each subpart of the CAR and explains each significant difference between the referencing subparts and the CAR. To quantify the difference in the recordkeeping and reporting burden, the identified differences between the referencing subparts and the CAR were assigned to the appropriate SF-83 burden item for that referencing subpart.

For example, the CAR does not contain requirements for records of the liquids transferred for a transfer rack. This record is required by the HON, so the burden reduction realized by not requiring

this record in the CAR is assigned to the HON SF-83 burden item that includes this recordkeeping requirement: "gather information, monitor, and inspect."

2.2.5 Estimated Percent Burden Reductions

A total burden reduction was estimated by summing the percent decrease in the number of hours per respondent per year estimated for each referencing subpart burden item. A percent reduction between zero and 100 percent was estimated; for purposes of scale, the following schedule was developed:

- slight burden reduction = 10 percent,
- substantial burden reduction = 30 percent,
- significant burden reduction = 60 percent, and
- provision not included in the CAR = 100 percent.

The percent burden reduction for a given burden item was a function of the individual burden differences that were assigned to that burden item. Table 1 summarizes the estimated percent burden reductions for each referencing subpart burden item; the individual differences assigned to each burden item, and the rationale for the burden reduction estimates are discussed in detail below.

TABLE 1. ESTIMATED PERCENT BURDEN REDUCTIONS

Referencing Subpart ¹	SF-83 Supporting Statement ² Burden Item	Percent Burden Reduction	Original Hours per Year per Respondent	Hours Saved per Year per Model CAR Unit
40 CFR part 63				
subparts F, G, and H (HON) ³	Read Rule And Instructions	25	167	42
subparts F, G, and H (HON)	Plan Activities	15	276	41
subparts F, G, and H (HON)	Gather Info, Monitor/Inspect	30	1250	375
subparts F, G, and H (HON)	Record/Disclose	30	35	11
subparts F, G, and H (HON)	Complete Reports	10	151	15
40 CFR part 60				
subpart Kb (storage vessels)	Read Instructions	25	1	0
subpart Kb (storage vessels)	Repeat Requirements	30	22	7
subpart NNN (distillation)	Read Instructions	25	1	0
subpart NNN (distillation)	Record Operating Parameters	40	8	3
subpart NNN (distillation)	Semiannual Report	10	6	1
subpart VV (equipment leaks)	Read Instructions	25	1	0
subpart VV (equipment leaks)	Record Operating Parameters	0	80	0
Baseline (total hours from the referencing subparts for ongoing requirements)			1998	
Total hours saved versus the referencing subparts				495

¹ These estimates are for a model facility that is representative of the industry. As such, the burden reduction estimates do not address every referencing subpart affected by the CAR, because it is unlikely that a typical facility would be subject to every SOCOMI rule.

² Descriptions of the activities covered in each burden item for the HON and subpart Kb are included in attachment 2 of this appendix. The burden items listed for subparts NNN and VV are self-explanatory.

³ Technical hours per year per source for the HON are taken from HON SF-83 Supporting Statement, Table 1a, Existing Source Annual Respondent Burden.

For the HON "read rule and instructions" burden item, the following significant differences between the referencing subpart and the CAR were evaluated:

- All language for add-on control equipment is consolidated into a single subpart,
- No general provisions "override" table is necessary as all of the CAR general provisions apply,
- No non-applicable general provisions, such as opacity or particulate matter (PM) provisions, are present to confuse the regulation,
- All the definitions are included in one place in the CAR,

- Improvements to the structure of the rule were made, resulting in an easier to read, audience-friendly text with less overall language, and
- Introduction of the Group 2A and Group 2B language to significantly clarify the process vent requirements while reducing overall text length.

Based on the absence of non-applicable provisions and the overall structure and language improvements, this burden item was assigned a decrease of 25 percent.

For the HON "plan activities" burden item, the simplified identification requirements under the CAR for the equipment leaks monitoring program were evaluated. Because any identification scheme that makes sense at the source is allowed under the CAR versus a list of identification numbers required by the HON, a burden decrease of 15 percent was assigned to this item.

For the HON "gather information, monitor, and inspect" burden item, the following significant differences between the referencing subpart and the CAR were evaluated:

- The CAR clarifies that annual inspections are adequate to demonstrate that a floating roof continuously floats,
- The CAR clarifies the requirements regarding when a floating roof is set upon the leg supports,
- Use of a consistent equation to determine net heating value for process vents,
- Elimination of a record of the liquids transferred through a transfer rack,
- New burden reduction provisions for valve and connector equipment leaks monitoring,
- Added flexibility in monitoring instrument calibration procedures for equipment leaks and closed vent systems,
- Added flexibility for instrument monitoring timing (i.e., can perform whenever a detectable material is present) for equipment leaks and closed vent systems, and
- Clarification regarding that "at least" one pilot flame must be monitored for a flare.

Equipment leak detection and repair encompasses much of the burden associated with the HON; valve and connector monitoring comprise a majority of the burden associated with the equipment leak provisions. The CAR equipment leaks monitoring programs for valves and connectors can reduce the burden from one-half to one-third of the pre-CAR levels. Combined with the other burden reductions associated with this burden item, a reduction of 30 percent was assigned.

For the HON "record/disclose" burden item, the streamlined continuous parameter monitoring system (CPMS) recordkeeping procedures were evaluated. For control and recovery device monitoring, revised data retention provisions of the CAR require less of the "continuous" raw data to be kept, but instead require keeping the hourly average data along with enough raw data to demonstrate that the hourly averages are being computed properly. A reduction of 30 percent was assigned.

For the HON "complete reports" burden item, the significant differences evaluated included the data items that were recorded and included with reports under the HON, but that are records only under the CAR. For example, the CAR requires only a record of the criteria being used to justify the group status of a Group 2B process vent. Under the HON, this was a record and a report. An overall burden decrease of 10 percent was assigned to this burden item.

For the 40 CFR part 60, subpart Kb, "read instructions" burden item, the overall improvements to the structure and language of the rule were evaluated. In addition, the CAR contains provisions for external floating roofs (EFR) converted into internal floating roofs (IFR) which clarifies this situation. These clarifications and improvements were assigned a burden reduction of 25 percent.

For the 40 CFR part 60, subpart Kb, "repeat requirements" burden item (which quantifies the burden associated with ongoing annual requirements), the following significant differences between the referencing subpart and the CAR were evaluated:

- The CAR clarifies that annual inspections are adequate to demonstrate that a floating roof continuously floats,
- The CAR clarifies the requirements regarding when a floating roof is set upon the leg supports,
- Automatic extensions for repair are allowed under the CAR (with appropriate recordkeeping),
- Automatic extensions for seal gap measurements are allowed when it is unsafe to perform seal gap measurements,
- 90 days are allowed versus 60 days to perform seal gap measurement upon refilling a storage vessel,
- Various inspection reports are not required individually; they can be included in the next periodic report,
- Less data is required to be reported during seal gap measurements, and raw data no longer must be reported,
- Streamlined recordkeeping for storage vessel inspections (i.e., a check-off sheet can be used in place of an explicit description of each item inspected on each storage vessel),
- No requirement to operate "with no detectable emissions" for a closed vent system; instead CAR provides work practice requirements,
- Clarification regarding that "at least" one pilot flame must be monitored for a flare, and
- Introduction of the HON data handling methodology as an alternative recordkeeping system for control and recovery device monitoring.

These differences bring the referencing subpart up to date with the latest approaches to compliance, and the less burdensome requirements of the CAR were assigned a burden reduction of 30 percent to reflect the difference.

For the 40 CFR part 60, subpart NNN, "read instructions" burden item, the introduction of group status language and the explicit procedures for a Group 2A process vent that is not using a recovery

device were evaluated. The significant clarification in language, along with the explicit language, was determined to account for a 25 percent decrease in burden.

For the 40 CFR part 60, subpart NNN, "record operating parameters" burden item, the following significant differences between the referencing subpart and the CAR were evaluated:

- TRE index value of 4.0 used, versus 8.0 in the referencing subpart, to specify Group 2A versus Group 2B status,
- Expanded use of engineering assessment in lieu of testing,
- No back calculation necessary for mixed stream sampling site determination,
- Consistent use of a net heating value equation,
- Exemption of some equipment (e.g., safety pressure relief devices) from closed vent system flow indicator requirements,
- CAR does not require a record of the boiler periods of operation, and
- Introduction of the HON data alternative recordkeeping system which allows certain monitoring systems to record only the daily averages and some systems to record only if the daily average is out of bounds.

These differences significantly affect the amount of information that must be retained. Hourly versus continuous (i.e., 15-minute) records for the flow indicators cuts the number of records for this specific requirement by 75 percent. Expanded engineering assessment curtails the need for testing where engineering assessment can be used. And some records are no longer required by the newer rules, so they have been dropped from the CAR. The EPA estimates a 40 percent burden reduction for this burden item.

For the 40 CFR part 60, subpart NNN, "semiannual report" burden item, the following difference was evaluated. The CAR requires only a record of the criteria being used to justify the group status of a Group 2B process vent. Under the referencing subpart, this was a record and a report. A burden decrease of 10 percent was assigned to this burden item.

For the 40 CFR part 60, subpart VV, "read instructions" burden item, the structure improvements and audience-friendly format were determined to decrease the burden by 25 percent.

For the 40 CFR part 60, subpart VV, "record operating parameters" burden item, the following significant differences between the referencing subpart and the CAR were evaluated:

- Less monitoring for low-leaking valve populations,
- Routine connector monitoring,
- Simplified identification requirements (no identification numbers are required by the CAR),
- Added flexibility in monitoring instrument calibration procedures,

- Added flexibility for instrument monitoring timing (i.e., can perform whenever a detectable material is present),
- No record of equipment operating under the vacuum service exemption is required,
- An exemption for equipment intended to be in service less than 300 hours per calendar year is included, and
- Records of the repair method, owner's signature, and expected date of repair are not required upon detecting a leak.

Some of these changes will increase burden and some will decrease burden. The leak definition is lower, thus, resulting in more required repairs. This factor will increase burden. However, the reduced valve monitoring has the potential to significantly reduce the burden of the referencing subpart because valve monitoring is a significant portion of the total burden. No net change in burden was assigned to this burden item.

2.2.6 Model Plant Sites

To simulate the varying degrees of complexity found at SOCFI plant sites, three model plant sites were developed. As noted previously, the same number and type equipment was assumed to be present at each model plant site. The number of model CAR units at the model plant sites is as follows:

- Model Plant Site 1: one model CAR unit;
- Model Plant Site 2: three model CAR units; and
- Model Plant Site 3: six model CAR units.

The purpose of assigning multiple model CAR units to the model plant sites is to quantify the additional burden reduction associated with bringing plant sites of varying complexity under one consolidated set of requirements. For example, a current plant site may be operating under different Group 2B process vent criteria for different process units. Equipment leak monitoring programs from two different referencing subparts may be applicable, requiring monitoring at different frequencies for the same types of equipment. Under the CAR, multiple reporting and recordkeeping requirements under several different referencing subparts and general provisions are consolidated into a single recordkeeping system and joint periodic report. To reflect this plant site-wide savings, an additional 15 percent burden reduction was added to the estimated hours saved for model plant sites 2 and 3, which have multiple CAR units.

2.2.7 Total Number of SOCFI Plant Sites

The HON SF-83 supporting statement estimated 371 subject sources in 1994. This analysis assumes an increase of approximately 10 percent to 400 plant sites in 1998. The analysis assumes 400 plant sites with at least one HON process present (i.e., 400 plant sites that fit the criteria of the

model plant sites). The 400 plant site number is a simplifying assumption that accounts for some growth in the industry since 1994 and accounts for potential use of the CAR by some non-HON, SOCOMI sources that are eligible to comply with the CAR.

2.2.8 Percent of Model Plant Sites Opting to Use the CAR

Based on the procedures described so far, a total number of model plant sites was estimated, along with the total number of hours saved per year per model plant site. The national total burden reduction, however, is a function of how many of the plant sites choose to comply with the CAR. This analysis presents a range, assuming 10 percent, 20 percent, and 30 percent of the total eligible plant sites will choose to comply with the CAR.

2.2.9 Distribution of Model Plant Sites Opting to Use the CAR

In addition, this analysis assumed that the larger, more complex plant sites will be more likely to opt to comply with the CAR because the potential burden reduction is greater. The total number of model plant sites that opt into the CAR was assumed to be distributed as follows:

- Model Plant Site 1 = 20 percent;
- Model Plant Site 2 = 35 percent; and
- Model Plant Site 3 = 45 percent.

For example, if 40 plant sites implement the CAR, of these sites, 20 percent (8 plant sites) are model 1, 35 percent (14 plant sites) are model 2, and 45 percent (18 plant sites) are model 3.

The national burden reduction is therefore the summation of the burden reductions for the model plant sites that opt into the CAR.

3.0 RESULTS

As previously shown in table 1, each model CAR unit which opts to comply with the CAR versus the referencing subparts is estimated to experience a burden reduction of 495 hours per year. This savings is the result of applying the percent decrease because of the CAR to each referencing subpart SF-83 burden item, followed by summing the resultant hours saved per burden item. To reflect the additional savings gained by bringing the plant site under one consistent program, model plant sites 1, 2, and 3 are estimated to have savings of 495, 1707, and 3415 hours per year per plant site, respectively.

The national total burden reduction is estimated according to several assumptions, detailed above. The estimated total national hours per year burden reduction ranges from 89,329 to 267,988. Table 2 details the range of the total national burden reduction estimate, which is a function of the percent of eligible plant sites that choose to comply with the CAR.

TABLE 2. NATIONAL ESTIMATE OF BURDEN REDUCTION

Percent of Plant Sites Opting to Use the CAR (%)	Number of Plant Sites Opting to Use the CAR	Baseline Burden	Total National Burden Reduction (Hours/Year)	Overall Percent Reduction (%)
10	40	315,684	89,329	28
20	80	631,368	178,659	28
30	120	947,052	267,988	28

This appendix contains two attachments. Attachment 1 to this appendix presents a list of the recordkeeping and reporting requirements contained in the CAR. Attachment 2 to this appendix describes the burden items used in table 1.

ATTACHMENT 1

Recordkeeping and Reporting Requirements under the Consolidated Air Rule1. General Records

- Copies of notifications, reports, and records as specified in § 65.5.
- Maintain a startup, shutdown, and malfunction plan as specified in § 65.6.

2. Storage Vessel Records

- Storage vessel records where emissions are controlled by a fixed roof and internal floating roof (IFR), external floating roof (EFR), or EFR converted into an IFR as specified in § 65.47.
- Storage vessel records where emissions are controlled by a control device as specified in § 65.159 for flare compliance determination and 65.163 for closed vent systems.
- Storage vessel records where emissions are routed to a fuel gas system or process as specified in § 65.163.

3. Process Vent Records

- General process vent records as specified in §§ 65.66, 65.63, and 65.160.
- Process vent records where emissions are controlled by a control device as specified in section 65.159 for flare compliance determination records and §§ 65.162 and 65.163.
- Process vent records where recovery devices are used to maintain the TRE index value above 1.0 as specified in 65.160.

4. Transfer Rack Records

- General Transfer Rack Records as specified in §§ 65.83, 65.87, and 65.160.
- Transfer Rack Records where emissions are controlled by a control device (except for low-throughput transfer operations) as specified in §§ 65.159, 65.162, and 65.163.
- Low-throughput transfer operation records where emissions are controlled by a control device as specified in §§ 65.159 and 65.163.

5. Equipment Leak Records

- General equipment leak records as specified in §§ 65.103, 65.104, and 65.105.
- Specific equipment leak records where equipment leak emissions are not controlled by a control device or routed to a process or fuel gas system as specified in §§ 65.106, 65.109, 65.111, and 65.120.
- Equipment leak records where emissions are controlled by a control device as specified in §§ 65.159 and 65.163.

6. Notification of Initial Startup

- General contents as specified in §§ 65.5 and 65.48.
- Initial Notification of Part 65 Applicability as specified in § 65.5.

7. Initial Compliance Status Report

- General contents as specified in § 65.5.
- Storage vessels as specified in §§ 65.163 and 65.164.
- Process vents as specified in §§ 65.63, 65.67, 65.160, 65.164, and 65.165.
- Low-volume transfer racks as specified in §§ 65.164 and 65.165.
- High-volume transfer racks as specified in §§ 65.83, 65.164, and 65.165.
- Equipment leaks as specified in §§ 65.117, 65.118, 65.119, and 65.120.

8. Periodic Reports

- General contents as specified in § 65.6.
- Storage vessel records where emissions are controlled by an IFR, EFR, or EFR converted into an IFR as specified in § 65.48.
- Storage vessels where emissions are controlled by a control device as specified in §§ 65.166.
- Process vents as specified in §§ 65.67 and 65.166.
- Low-volume transfer racks as specified in § 65.166.
- High-volume transfer racks as specified in § 65.166.
- Equipment leaks as specified in § 65.120.
- Closed vent systems as specified in §§ 65.143 and 65.166.
- Flares as specified in § 65.166.

9. Other Notification and Reports

- Request for alteration of time periods or postmark as specified in § 65.5.
- Startup, shutdown, and malfunction periodic report as specified in § 65.6.
- Startup, shutdown, and malfunction immediate report as specified in § 65.6.
- Written application for waiver of recordkeeping and reporting as specified in § 65.7.
- Request for approval for alternatives to monitoring or recordkeeping as specified in § 65.7.
- Storage vessel refilling notification as specified in § 65.48.
- Storage vessel seal gap measurement notification as specified in § 65.48.
- Process vent Group 2A without a recovery device monitoring and recordkeeping and reporting plan as specified in § 65.63.
- Process vent report of a process change if not included with the periodic report as specified in § 65.67.
- Intent to conduct a performance test as specified in § 65.67.

- Process vent report according to the plan for Group 2A process vents without a recovery device as specified in § 65.67.
- Equipment leaks written request for alternative means of emission limitation as specified in § 65.102.

ATTACHMENT 2

Descriptions of Burden Items from Table 1

- Description of Burden Items for the HON Found on Table 1
SOURCE: Attachment 2, HON SF-83 Supporting Statement
 - 1) Read Rule and Instructions are the activities, less training, which involve comprehending the provisions in the standard and understanding how they apply to the respective points at a facility.
 - 2) Plan Activities represents such burdens as design, redesign, scheduling as well as drafting the implementation plan, and selecting methods of compliance.
 - 3) Training represents the portion (assumed 40%) of activities from 1) Read Rule and Instruction which an average facility would elect to provide class room instruction for. The standard does not require specific training itself.
 - 4) Create, Test, Research & Development are the activities involving testing, retesting, establishing operating range for parameters and analyzing point by point applicability. Monitor related refit, calibration and maintenance activities are also included under this heading.
 - 5) Gather Information, Monitor and Inspect are the activities involving physical inspections of equipment, collection of monitored data and other related activities.
 - 6) Process/Compile & Review are the activities that involve analysis of the information collected for accuracy, compliance and appropriate reports and records required as a result.
 - 7) Complete Reports represents the activities normally associated with filling out forms. Since the standard requires no standard forms, these activities relate to the preparing of formal reports and cover letters as appropriate.
 - 8) Record/Disclose are activities which are solely recordkeeping which occur once the appropriate report information has been extracted (see assumption (D) above). These activities involve software translation, duplication or archival processes normally associated with data management and storage common to this industry.
 - 9) Store/File are again activities which are solely recordkeeping which occur once the appropriate report information has been extracted (see assumption (D) above). These activities involve the management life cycle of records, from the time they are filed and boxed up, to the time they are disposed.
- Description of Burden Items For Subpart Kb Found on Table 1
SOURCE: Subpart Kb SF-83 Supporting Statement

Repeat Requirements include:

- IFR internal inspection
- IFR visual inspection
- Report of IFR failure
- Notification of delay of repair or emptying for IFR
- EFR first seal gap measurement
- EFR second seal gap measurement

Appendix B: Cross Referenced Sections

This appendix provides a list of all citations within individual rules that are not incorporated into the CAR. Facilities subject to these subparts will need to continue to comply with these requirements *even if they opt to comply with the CAR*.

40 CFR part 60, subpart A (general provisions, applicable to all part 60 rules)

§ 60.1

§ 60.2

§ 60.5

§ 60.6

§ 60.7(a)(1)

§ 60.7(a)(4)

§ 60.14

§ 60.15

§ 60.16

40 CFR part 60, subpart Ka – Storage Vessels

§ 60.110a

§ 60.111a

§ 60.115a

40 CFR part 60, subpart Kb – Storage Vessels

§ 60.110b

§ 60.111b

§ 60.116b(c)

§ 60.116b(e)

§ 60.116b(f)(1)

§ 60.116b(g)

40 CFR part 60, subpart VV – Equipment Leaks

§ 60.480

§ 60.481

§ 60.482-1(a)

§ 60.485(d)

§ 60.485(e)

§ 60.485(f)

§ 60.486(i)

§ 60.486(j)

§ 60.488

§ 60.489

40 CFR part 60, subpart DDD – Polymer Manufacturing

§ 60.560(a)

§ 60.560(b)

§ 60.560(d) through (j)

§ 60.561

§ 60.562-1

§ 60.562-2

40 CFR part 60, subpart III – Air Oxidation Unit Processes

§ 60.610(a)

§ 60.610(b)

§ 60.610(d)

§ 60.611

§ 60.616

§ 60.617

40 CFR part 60, subpart NNN – Distillation Operations

§ 60.660(a)

§ 60.660(b)

§ 60.660(c)(1) through (c)(3)

§ 60.660(c)(5)

§ 60.660(d)

§ 60.661

§ 60.666

§ 60.667

40 CFR part 60, subpart RRR – Reactor Processes

§ 60.700(a)

§ 60.700(b)

§ 60.700(c)(1)

§ 60.700 (c)(3)

§ 60.700 (c)(5) through (c)(7)

§ 60.700(d)

§ 60.701

§ 60.706

§ 60.707

40 CFR part 61, subpart A (general provisions, applicable to all part 61 rules)

§ 61.01

§ 61.02

§ 61.05

§ 61.06

§ 61.07

§ 61.08

§ 61.10(b)

§ 61.10(c)

§ 61.11

§ 61.15

40 CFR part 61, subpart V– Equipment Leaks (Fugitive Emission Sources)

§ 61.240

§ 61.241

§ 61.245(d)

§ 61.246(i)

§ 61.246(j)

§ 61.247(a)

§ 61.247(f)

40 CFR part 61, subpart Y – Benzene Storage Vessels

§ 61.270

§ 61.271(d)(2)

§ 61.274(a)

40 CFR part 61, subpart BB – Benzene Transfer Operations

§ 61.300

§ 61.301

40 CFR part 63, subpart A (general provisions, applicable to all part 63 rules)

§ 63.1(a)(1), (a)(2), (a)(3), (a)(13), (a)(14), (b)(2), and (c)(4)

§ 63.2

§ 63.5(a)(1), (a)(2), (b), (d)(1)(ii), (d)(3)(i)^b, (d)(3)(iii)^b, (d)(3)(iv)^a, (d)(3)(v)^a, (d)(3)(vi)^a, (d)(4), (e), (f)(1), and (f)(2)

§ 63.6(a), (b)(3), (c)(5), (i)(1), (i)(2), (i)(4)(i)(A), (i)(5) through (i)(14), (i)(16), and (j)

§ 63.9(a)(2), (b)(4)(i)^b, (b)(4)(ii), (b)(4)(iii), (b)(5)^b, (c), (d)

§ 63.10(d)(4)

§ 63.12(b)

^a These provisions do not apply to equipment leaks.

^b The notifications specified in § 63.9(b)(4)(i) and (b)(5) shall be submitted at the times specified in 40 CFR part 65.

40 CFR part 63, subparts F and G Hazardous Organic NESHAP (For Process Vents, Group 1 Storage Vessels, and Group 1 Transfer Racks)

- § 63.100 of subpart F
- § 63.101 of subpart F
- § 63.104 of subpart F
- § 63.105 of subpart F
- § 63.110 of subpart F
- § 63.111 of subpart F

40 CFR part 63, subpart H - Equipment Leaks

- § 63.100 of subpart F
- § 63.101 of subpart F
- § 63.104 of subpart F
- § 63.105 of subpart F
- § 63.160 of subpart H
- § 63.161 of subpart H
- § 63.180(d) of subpart H